REDACTED BY ORDER OF THE COURT

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 1              IN THE UNITED STATES DISTRICT COURT
            FOR THE EASTERN DISTRICT OF TEXAS
 2                   MARSHALL DIVISION

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    PACKET INTELLIGENCE LLC      )(      CIVIL DOCKET NO.
 4                               )(
                                 )(      2:16-CV-147-JRG
 5                               )(
                                 )(
 6  VS.                          )(      MARSHALL, TEXAS
                                 )(
 7                               )(
                                 )(
 8  SANDVINE CORPORATION AND     )(      NOVEMBER 8, 2017
    SANDVINE INCORPORATED ULC    )(      8:30 A.M.
 9

10                      TRANSCRIPT OF JURY TRIAL

11           BEFORE THE HONORABLE JUDGE RODNEY GILSTRAP

12                 UNITED STATES DISTRICT JUDGE

13  APPEARANCES:

14  FOR THE PLAINTIFF:        Mr. Paul J. Skiermont
                              Ms. Sadaf R. Abdullah
15                            Mr. Steven K. Hartsell
                              Mr. Alexander E. Gasser
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                              Official Court Reporter
20                            United States District Court
                              Eastern District of Texas
21                            Marshall Division
                              100 E. Houston Street
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23

24

25  (Proceedings recorded by mechanical stenography,
    transcript produced on CAT system.)
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                 *****************************************
14

15                   P R O C E E D I N G S

16              (Jury out.)

17              COURT SECURITY OFFICER:  All rise.

18              THE COURT:  Be seated, please.

19              All right.  Counsel, are the parties

20  prepared to read into the record those items from the

21  list of pre-admitted exhibits used during yesterday's

22  portion of the trial?

23              MR. HARTSELL:  Yes, Your Honor.

24              THE COURT:  Please proceed to do so from

25  the podium.
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 1                    MR. HARTSELL:  Yesterday's exhibits

 2 exclude PTX-116, 118, 130, 138, 283, 293, 294, 295, 337,

 3 363, 367, 390, 391, 416, and 381.  And DX Nos. 190, 52,

 4 53, 219, and 221.

 5                    THE COURT:  All right.  Does Defendant

 6 have any objection to that rendition as offered by the

 7 Plaintiff?

 8                    MR. BURESH:  No, Your Honor.

 9                    THE COURT:  Does Defendant have a similar

10 rendition to offer?

11                    MR. BURESH:  We do not, Your Honor.

12                    THE COURT:  All right.

13                    MR. BURESH:  Your Honor, if I might?

14                    THE COURT:  Yes.

15                    MR. BURESH:  Yesterday you had given Mr.

16 Don Bowman leave to stay in the courtroom.  In light of

17 the potential proceedings, we'd like to have him leave

18 if that's all right with you.

19                    THE COURT:  You're asking to -- you're

20 asking me to reinvoke the Rule as to him or you're

21 just --

22                    MR. BURESH:  The Plaintiff had invoked

23 the Rule, and just in light of potential proceedings, I

24 think it's best that we reinvoke that Rule in -- in

25 light of Plaintiff's request.
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 1                    THE COURT:  Well, Mr. Bowman is under

 2  your control more than anybody else's, Mr. Buresh, if

 3  you want him out of the courtroom you can instruct him

 4  to stay out of the courtroom.  And I don't think anybody

 5  will argue whether he's here or not here at a later

 6  date.

 7                    MR. BURESH:  Thank you, Your Honor.

 8                    THE COURT:  And I'll note that Mr. Bowman

 9  is leaving and exiting the courtroom at this time.

10                    All right.  Is there anything else to

11  take up before we bring the jury back in?

12                    MR. DAVIS:  Nothing from the Plaintiff,

13  Your Honor.

14                    THE COURT:  And Defendant has one

15  additional witness to call; is that correct?

16                    MR. KEAN:  Yes, Your Honor, Defendant

17  calls Ms. Sue Stuckwisch.

18                    THE COURT:   Well, we'll do that when we

19  get the jury in the box.  I'm just checking, all right?

20                    Let's bring in the jury, Mr. Nance.

21                    COURT SECURITY OFFICER:  All rise for the

22  jury.

23                    (Jury in.)

24                    THE COURT:  Good morning, ladies and

25  gentlemen.  Please have a seat.
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 1                    All right.  Defendants, call your next

 2   witness.

 3                    MR. KEAN:    Your Honor, Defendants call

 4   Ms. Sue Stuckwisch.

 5                    THE COURT:  All right.  Has this witness

 6   been sworn, Counsel?

 7                    MR. KEAN:  Yes, Your Honor.

 8                    THE COURT:  All right.  If you'll please

 9   come take the witness stand.

10                    I knew there was one lady among all those

11   men that were sworn in together.  I guess you're it.

12                    THE WITNESS:  It is me, Your Honor.

13                    THE COURT:  All right.  Counsel, you may

14   proceed with your direct examination.

15    SUE STUCKWISCH, DEFENDANTS' WITNESS, PREVIOUSLY SWORN

16                     DIRECT EXAMINATION

17   BY MR. KEAN:

18       Q.   Good morning, Ms. Stuckwisch.

19       A.   Good morning.

20       Q.   Would you please introduce yourself to the

21   jury?

22       A.   Yes.  My name is Sue Stuckwisch, and I'm a

23   partner at a global consulting firm called Alvarez &

24   Marsal.

25       Q.   And would you please tell the jury what you do
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 1  for a living?
 2       A.   Yes.   I'm a forensic economist, so what that
 3  means is I apply economic theory and economic methods to
 4  questions that arise in litigation -- for example,
 5  calculating economic damages or valuing patents, like
 6  what we're doing here today.
 7       Q.   What were you hired to do in this case?
 8       A.   To respond to Mr. Bergman's analysis and
 9  testimony.
10       Q.   Will you be presenting a damages number in
11  this case?
12       A.   Yes.
13       Q.   And does the fact that you're presenting a
14  damages number tell the jury anything about the question
15  of infringement?
16       A.   No, not at all.
17       Q.   If the jury finds no infringement, what is the
18  appropriate damages number in this case?
19       A.   Then there are no damages.
20       Q.   Tell us a little bit about your educational
21  background, please.
22       A.   Sure.   I have a Bachelor's of Science in
23  mechanical engineering from the University of Texas at
24  Austin, and I worked as an engineer for a few years.   I
25  was a defense contractor working on the design of
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1 nuclear submarines. Then I went back to school, went to

2 grad school, where I got a Master's in business

3 administration and a Master's in economics with a focus

4 in econometrics, which is the math behind the economic

5 theory.

6   Q.   What have you done professionally since

7 leaving graduate school?

8   A.   When I was in grad school, I was recruited by

9 Coopers & Lybrand, which was one of the big accounting

10 firms. And I was recruited into a group called

11 litigation support. And what that group is, we did

12 accounting investigations and then we also did expert

13 witness testimony calculating damages, like what I

14 continue to do today.

15   Q.   How many years have you worked as an economist

16 doing patent and other intellectual property valuations?

17   A.   So almost 20 years.

18   Q.   And how many patent valuations have you been

19 involved in during that time frame?

20   A.   Probably a hundred.

21   Q.   How is your education and experience relevant

22 to the testimony that you're going to be providing

23 today?

24   A.   My engineering degree helps me understand the

25 technology. My Master's in business administration

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 1  helps me understand the business.  And my Master's in

 2  economics allows me to apply sound economic theory and

 3  methods to the analysis.

 4       Q.   In your past experience, have you worked with

 5  both Plaintiffs and Defendants?

 6       A.   Yes, I have.

 7       Q.   Have you testified in United States District

 8  Court before?

 9       A.   Yes, I have.

10            MR. KEAN:   Your Honor, we offer Ms.

11  Stuckwisch as an expert on economics and the valuation

12  of patent damages.

13            THE COURT:  Is there objection?

14            MR. DAVIS:  No objection, Your Honor.

15            THE COURT:  The Court will recognize the

16  witness as an expert in the designated fields.

17            Proceed.

18            MR. KEAN:   Thank you.

19       Q.   (By Mr. Kean)  Ms. Stuckwisch, do you get paid

20  for your work on this case?

21       A.   Yes.  My -- my firm is compensated for my time

22  spent, and my hourly rate is 575 an hour.

23       Q.   How many hours have you spent working on this

24  case?

25       A.   I think I've spent about 350 hours.
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 1   Q.   Does the fact that you're paid to do this

 2 analysis affect your conclusions at all?

 3   A.   No, not at all.   Our compensation is not tied

 4 to the outcome of the case.   It's not tied to any

 5 results whatsoever.

 6   Q.   Before your work on this case, did you know

 7 anyone at Sandvine?

 8   A.   No.

 9   Q.   Did you know anyone at Packet Intelligence?

10   A.   No.

11   Q.   Before your work on this case, did you know

12 any of the lawyers that are appearing on behalf of

13 either party in this case?

14   A.   No, I did not.

15   Q.   Before your work on this case, had you ever

16 heard of the patents that are asserted here or any of

17 the inventors that are listed on those patents?

18   A.   No, huh-uh.

19   Q.   Did you begin your analysis with a particular

20 royalty rate in mind?

21   A.   No.

22   Q.   Did you begin your analysis with a particular

23 damages number in mind?

24   A.   No.

25   Q.   And when you're providing your analysis today,

1 is that because Sandvine infringes?

2   A.   No.   As a damages expert, we actually have to

3 pretend that there is infringement.   Just like Mr.

4 Bergman, I do it.   It's not specific to this case.   It's

5 all cases, because otherwise, damages would be zero.

6   Q.   Regarding patent valuation generally, and if

7 you assume infringement, how do you go about valuing a

8 patent?

9   A.   So conceptually valuing a patent is fairly

10 straightforward.   It's just like valuing any other

11 asset, so if you're valuing your car or a house.   So if

12 we take a car as an example, I think a lot of people are

13 familiar with Kelley Blue Book.   So for a car, you can

14 look up the make and model of your car, the year, and

15 then you can get a value.   And then I think Kelley Blue

16 Book also allows for adjustments like the total mileage

17 and the overall condition of the car, and then it tells

18 you the value.

19   Well, valuing a house is a little bit more

20 complicated, but it's that same process.   So the first

21 thing you do when you value a house is you look for

22 comparable transactions, so other sales that have

23 occurred of similar homes.   And so you have to find what

24 are the most appropriate comps in order to do that, so

25 you look for homes that are similar, probably in your

1 neighborhood, maybe in the same school district,

2 probably the general condition of the home. You're

3 going to look for similarities. It doesn't have to be

4 perfect, but you try to find something that is similar

5 enough so that you don't have to speculate.

6   And then once you find that comp, then you

7 make adjustments for the differences. So, for example,

8 if the comparable sales transaction, if that house, the

9 total square footage was, say, 1,250 square feet but

10 your house was 1500 square feet, you're going to want to

11 make an adjustment up. Whereas, for example, if the

12 comp had a remodelled kitchen and you still had all the

13 old appliances, hadn't updated your kitchen, then you'd

14 have to adjust the comp downward.

15   So once you make all of those adjustments,

16 then you come up with a final sales price or a final

17 value for your house.

18   Now, valuing a patent, again, it's that same

19 methodology, so just like when I -- you know, a car is

20 pretty straightforward, a house a little more

21 complicated, a patent is more complicated, but, again,

22 it's that same methodology. And also valuing a patent,

23 there's going to be some terminology that's very

24 specific to valuing a patent.

25   The first thing you do is you start out with

1   what we call a hypothetical negotiation. What that is,

2   is we just reconstruct what would be a real-world

3   licensing negotiation. So you've got a -- you bring the

4   two parties together, so the patent owner and then the

5   company that wants to license that patent, that

6   technology. They come together willingly. And what

7   that means is they both want to actually negotiate a

8   license. So they want to walk away with a license, and

9   they both have the same amount of information, and they

10   follow the same method.

11   So the first thing that they're going to do is

12   they're going to try to find an appropriate comp or

13   comps. And, again, to find the appropriate comps, there

14   needs to be enough information so that you're not

15   speculating.

16   So, again, it doesn't have to be identical,

17   just like in the example of the house, but it has to be

18   similar enough so that you can make reasonable

19   adjustments or reasonable assumptions.

20   So, for example, when you're trying to find a

21   comp, you're probably going to -- you're going to want

22   to look for similar technology. You're going to look

23   for the same industry. You might look for similar

24   products that include the technology. And then once you

25   have that comp, then you also -- and you also need to

1 have a starting point for that comp. And the starting

2 point could be the royalty rate.

3   And I know we've talked about royalty rates,

4 so let me just remind you, the royalty rate is like a

5 sales tax. So it can be in the form of a percent, so

6 you apply a percent times all the sales that include the

7 technology.

8   THE COURT: Let me interrupt just a

9 minute. First of all, Ms. Stuckwisch, you're going to

10 need to slow down.

11   And, Counsel, you're going to have to ask

12 individual questions. This is not a narrative where she

13 can talk for 10 or 12 minutes non-stop and give us a

14 lecture.

15   MR. KEAN: Yes, Your Honor.

16   THE COURT: All right. Let's proceed.

17   Q.   (By Mr. Kean) Ms. Stuckwisch, you mentioned a

18 couple of different terms there. I think you mentioned

19 comp and also comparable transaction. Are those the

20 same thing?

21   A.   Yes, those are the same thing.

22   Q.   Now, when you have a comparable agreement and

23 that comparable agreement has a particular royalty rate

24 in the agreement, do you apply that same royalty rate

25 when you're evaluating later cases?

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 1        A.    No, you don't.   That's just the starting

 2  point.   And then from there, you have to make

 3  adjustments.

 4        Q.    When is a transaction not a comparable?

 5        A.    It's not comparable when you have to speculate

 6  or if you have assumptions that are unreliable or you

 7  don't have support for those assumptions.

 8        Q.    And you mentioned a couple of other terms, I

 9  think you mentioned a royalty base.   What is a royalty

10  base?

11        A.    So the royalty base is -- it's -- it's the

12  footprint of the technology.   So what we mean by that is

13  it's going to be the product that includes the

14  technology, but whatever the smallest product is that is

15  being sold that includes the technology.

16             So if we think about windshield wipers on a

17  car, the royalty base would be the windshield wipers,

18  not the total value of the car.   So you want the

19  smallest product that includes the technology.

20        Q.    What are the tools that the jury needs in

21  order to do an accurate patent valuation?

22        A.    There's three tools.   First, you need to find

23  the right comp.   Then, you need to make the appropriate

24  adjustments to ultimately get the appropriate royalty

25  rate.   And then you need to apply it to the correct
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1 base, that royalty base.

2   So it's the right comp, the right adjustments

3 to get the royalty rate, and then the appropriate

4 royalty base.

5   Q.   Regarding this case, Ms. Stuckwisch, will you

6 briefly describe the work that you did here?

7   A.   Sure. So I started out getting a general

8 understanding of the case, so the allegations in the

9 matter, what Packet Intelligence is claiming against

10 Sandvine. Then I did some research on the parties. I

11 wanted to understand who Packet Intelligence is, who

12 Sandvine is, what products Sandvine sells, the overall

13 market that they compete in, who their customers are,

14 who their competitors are.

15   Then I collected and analyzed data. So I

16 looked at Sandvine's financial data. I looked at and

17 analyzed Sandvine's sales data, including the sales of

18 the accused products. I also analyzed license agreement

19 in order to find a comparable transaction.

20   And then I reviewed Mr. Bergman's report and

21 his testimony, and I replicated all of his calculations,

22 all of his analysis. I analyzed his assumptions and his

23 inputs. And then I summarized all my findings in my

24 expert reports. And now I'm -- I'm here explaining all

25 of that to you guys.

 1   Q.   For your analysis, did you make the assumption

 2 that there had been a finding of infringement?

 3   A.   Yes. So, again, that's -- that's what we have

 4 to do as a damages expert.

 5   Q.   And so does your analysis apply at all if the

 6 jury finds no infringement?

 7   A.   No, if -- if you find no infringement, my

 8 analysis is irrelevant, and Mr. Bergman's analysis is

 9 irrelevant. Damages are zero.

10   Q.   Did you hear Mr. Bergman testify yesterday

11 about forward citations?

12   A.   Yes, I did.

13   Q.   Now, if you don't know the average number of

14 forward citations of similar patents, does the number of

15 forward citations tell you anything about the value of a

16 patent?

17   A.   No, because you don't have anything to compare

18 it to, so it's -- it has no meaning whatsoever.

19   Q.   Is there a comparable transaction that's

20 available to us in this case?

21   A.   Yes, there is.

22   Q.   What is it?

23   A.   It's the Exar-Hi/Fn acquisition.

24   Q.   And would you just briefly remind the jury who

25 are the entities Exar and Hi/Fn?

1   A.   Sure.   So Exar and Hi/Fn, those were two

2 technology product companies.   And in 2009, when the

3 acquisition took place, Hi/Fn owned a portfolio of

4 patents.   And included in that portfolio are the three

5 patents that are being asserted in this case or that are

6 claimed in this case.   And then Exar acquired Hi/Fn,

7 again, it was in 2009.

8   Q.   How many patents did Exar buy from Hi/Fn?

9   A.   There were 43 patents, including the three

10 that are in this case.

11   Q.   Is there any evidence in this case that shows

12 the royalty rate that was applied to that Exar-Hi/Fn

13 transaction?

14   A.   Yes, there is.   There's a valuation report

15 that was -- that was conducted.

16   MR. KEAN: Mr. Palisoul, will you please

17 bring up DX-189 at Exar 150?

18   Q.   (By Mr. Kean)   Ms. Stuckwisch, do you

19 recognize this document?

20   A.   Yes, I do.

21   Q.   What is it?

22   A.   This is a valuation report.   It was written by

23 Duff & Phelps.   Duff & Phelps, they are valuation

24 experts.   And they prepared this report to value the --

25 the assets that were acquired when Exar purchased Hi/Fn.

1 And this summarizes their findings.

2   Q.   And what was the royalty rate there?

3   A.   The royalty rate was 2 percent.

4   Q.   And what was the purpose of the Duff &

5 Phelps -- Duff & Phelps report? For instance, was it

6 used for tax purposes?

7   A.   Yes, that -- that's exactly what it was for.

8 It was for tax purposes to report intangible assets.

9   Q.   Does Mr. Bergman agree that the Duff & Phelps

10 valuation here is a comparable to this case?

11   A.   Yes, he does.

12   Q.   Is there any evidence in this case that shows

13 the total value of the patents that were acquired by

14 Exar at the time of the transaction with Hi/Fn?

15   A.   Yes, there's an accounting memo, as well, that

16 shows that.

17   Q.   And we'll jump to the accounting memo in just

18 a second.

19   What was the value of the 43 patents that Exar

20 purchased from Hi/Fn at the time of the purchase back in

21 2009?

22   A.   So the value, again, it was for the 43

23 patents, including the three in this case. It was $1.5

24 million.

25   Q.   Did Packet Intelligence then acquire some

1 patents from Exar?

2   A.   Yes, in 2012, Packet Intelligence acquired 26

3 of the 43 patents, including the three that are in this

4 case.

5   Q.   Is there evidence that shows the total value

6 of the 43 Hi/Fn patents in 2012?

7   A.   Yes, there is.

8   MR. KEAN: Mr. Palisoul, will you

9 please -- please bring up DX-188 at Exar 83, please?

10   Q.   (By Mr. Kean) Ms. Stuckwisch, do you

11 recognize this document?

12   A.   Yes, this is part of the accounting memo that

13 I was referring to earlier. And the accounting memo,

14 it's just a summary of how Exar is going to record the

15 sale of -- of the patents, so when they sold the

16 patents, they have to record that on their financial

17 statements, and this summarizes how they're going to do

18 that.

19   Q.   And what was the total value of the 43 Hi/Fn

20 patents in 2012?

21   A.   So you can see that in the far right column,

22 it shows the 43 patents were valued, according to this

23 memo, at $481,250.00.

24   Q.   Did Packet Intelligence buy the entire Exar

25 portfolio?

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 1        A.    No, they bought 26 of those 43 patents.
 2        Q.    Does the Exar accounting memo tell you
 3  anything about the 26 patents that were purchased by
 4  Packet Intelligence?
 5        A.    Yes, so those are under the column sold
 6  patents, and you can see the 26 were valued at
 7  $276,909.00.
 8        Q.    According to this Exar accounting memo, is
 9  there any value to the 17 patents that Exar kept and
10  never sold to Packet Intelligence?
11        A.    Yes, that's the middle column.  And you can
12  see there that according to this memo, the value was
13  based at 204,341 for the 17 patents that Packet
14  Intelligence did not purchase.
15        Q.    What does this Exar accounting memo tell you
16  about valuing the three patents that are asserted in
17  this case?
18        A.    Well, it tells me that the starting point,
19  2 percent, that it needs to be adjusted, and it needs to
20  be adjusted downward.
21        Q.    Now, yesterday, the jury heard about
22  Georgia-Pacific factors.  Would you please describe what
23  those are?
24        A.    Sure.  So the Georgia-Pacific factors are
25  different considerations that one would look to in a
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1 real-life licensing negotiation. So they include things

2 like business considerations, licensing considerations,

3 if there's other licenses out there or licensing

4 policies for the patentholder. It also includes

5 technology considerations, so how important is the

6 technology relative to the products that it's going to

7 be included in. And then other considerations, as well.

8   For example, the relationship between the

9 patentholder and the company that's going to purchase

10 the patents.

11   Q.   Did you consider those factors in your

12 analysis?

13   A.   Yes, I did. I analyzed all of those factors.

14   Q.   What did the Georgia-Pacific factors tell you

15 about how to adjust the royalty rate from the Exar-Hi/Fn

16 agreement?

17   A.   So it told me, again, that an adjustment was

18 necessary, and that adjustment should be downward. So I

19 should reduce the royalty rate.

20   Q.   In your analysis, did you make any assumptions

21 about the use of the allegedly infringing technology in

22 Sandvine's products?

23   A.   Yes, I did. So one of the Georgia-Pacific

24 factors, Factor No. 13, it asks you to look at the

25 portion of the patented technology relative to the

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 1  overall product.  And I made an assumption there that

 2  it's 50 percent, and that's just based on Mr. Bergman's

 3  analysis.  I just used his number.

 4       Q.   So in the testimony that you're going to

 5  provide today, you made the assumption that Mr.

 6  Bergman's analysis was correct?

 7       A.   For the purposes of my analysis, yes.  Just

 8  for that one number, to be clear.

 9       Q.   Yeah.  And if Mr. Bergman's assumption about

10  the use of the patented technology within the accused

11  products was wrong, would that change your analysis?

12       A.   Yes, it would.

13       Q.   How would it change it?

14       A.   Then I would reduce the royalty rate even

15  more, and it would be at the bottom end of the range.

16       Q.   Is there evidence -- other evidence that

17  you've seen in this case that confirms that your

18  adjustment to the royalty rate is accurate?

19       A.   Yes, there are.  So as a part of the

20  Georgia-Pacific factors, I mentioned also licensing

21  considerations.  And there are some other licenses that

22  involve similar technology, and -- and those have been

23  mentioned earlier in the week.  Those are the MeterFlow

24  licenses.

25            So there's two MeterFlow licenses that I
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 1 looked at.   One was with a company called Fluke, and in

 2 that license agreement, the royalty rate was $125,000

 3 upfront and then an additional $25 per unit that was

 4 being sold.   That equates to a royalty rate of .14

 5 percent.

 6   The second MeterFlow license agreement was

 7 with a company called RCS.   And in that license

 8 agreement the royalty rate or the license amount was an

 9 upfront fee of $320,000.   And that equates to a royalty

10 rate of .28 percent.

11   Q.   In light of all the evidence that you've seen

12 in this case, do you have an opinion as to what the

13 appropriate royalty rate should be?

14   A.   Yes, I do.

15   Q.   What is it?

16   A.   .75 percent.

17   Q.   Regarding the royalty base, should a royalty

18 base include projected revenue?

19   A.   No, it should not.

20   Q.   Why not?

21   A.   Because it's speculative.

22   Q.   In light of all the evidence that you've seen

23 in this case, do you have an opinion as to the

24 appropriate royalty base here?

25   A.   Yes, I do.   It should be the accused products

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 1  and no more, and that is $114 million.

 2               MR. KEAN:  Mr. Palisoul, will you please

 3  present Slide 1 from Ms. Stuckwisch's presentation?

 4       Q.   (By Mr. Kean)  Ms. Stuckwisch, did you prepare

 5  demonstratives in preparation for your testimony today?

 6       A.   Yes, I did.

 7       Q.   Did you prepare this demonstrative?

 8       A.   Yes, I did.

 9               MR. KEAN:  And, Mr. Palisoul, I -- if we

10  could use the version that is most recent.

11       Q.   (By Mr. Kean)  Ms. Stuckwisch, did you also

12  prepare this version of the demonstrative for your

13  testimony today?

14       A.   Yes, sir.

15       Q.   And what does this -- what does this

16  illustrate?

17       A.   This -- this really summarizes what we've --

18  what we've been talking about.  So you can see at the

19  top of the pyramid or the upside down pyramid, you can

20  see the starting point for the hypothetical negotiation.

21          So the starting point is the Exar-Hi/Fn

22  acquisition where Exar purchased outright 43 patents in

23  2009, and they purchased them for $1.5 million, so that

24  was what the value that was assigned to it, and a

25  royalty rate of 2 percent.
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1   Q.   And let me stop you there.   What happened next

2 in 2012?

3   A.   In 2012, Exar sold those patents, or 26 of the

4 43 patents to Packet Intelligence.   Again, it was

5 another sale of the -- of the technology.   And in 2012,

6 the value was $875,000.   And there's no royalty rate

7 there because Packet Intelligence doesn't sell any

8 products.

9   Q.   And what have you illustrated at the very

10 bottom of this demonstrative?

11   A.   So this summarizes my conclusion, which -- so,

12 again, we're trying to value just three of those

13 patents.   So -- so the three patents were included in

14 the 26.   The three patents were included in the original

15 43.   And so my conclusion is those three patents should

16 have a royalty rate of .75 percent.   And when you

17 multiply that times the appropriate royalty base of $114

18 million, you get 858,000 for the total value of the

19 three patents.

20   Q.   Why is your proposed royalty rate different

21 than the one Mr. Bergman presented?

22   A.   So we both started with the Exar-Hi/Fn

23 agreement.   So we both agree that that's a comparable

24 transaction, and the starting point in that agreement is

25 2 percent.   So we're both starting with 2 percent.

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 1              I've walked through the analysis where I

 2  adjusted the 2 percent downward.  So, again, the

 3  Exar-Hi/Fn acquisition included the 43 patents.  It was

 4  a purchase of the patents.  And I adjusted downward, and

 5  I got .75.

 6              Mr. Bergman, same comp, same starting point of

 7  2.0, same facts, same situation.  He adjusted upward.

 8  I've reviewed his report.  I've listened to his

 9  testimony, and it just doesn't make any sense to me that

10  you would adjust it up from the starting point of 2.0.

11      Q.    Regarding Cisco, did you hear Mr. Bergman

12  testify yesterday that the Cisco settlement was a

13  comparable agreement?

14      A.    Yes, I did.

15      Q.    Do you agree?

16      A.    No, I do not.

17      Q.    What was the context of the agreement between

18  Cisco and Packet Intelligence?

19      A.    So in 2014, Packet Intelligence sued Cisco.

20  And then shortly thereafter, they settled that lawsuit,

21  and they entered into a settlement and license

22  agreement.  And I just want to clarify that this is not

23  a stand-alone license agreement.  It was to settle the

24  lawsuit.  So it's a settlement agreement and license.

25      Q.    Was that Cisco settlement ever presented to or
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1 decided by a jury?

2   A.   No, it was not.

3   Q.   Are settlement agreements typically reliable

4 to use in patent valuations?

5   A.   Not usually, no.

6   Q.   Why not?

7   A.   Because they usually don't have enough

8 information. And there are a lot of different reasons

9 why companies settle lawsuits. And if that -- those

10 reasons are not documented, we would have to speculate.

11 And as I've been talking and going through this, in

12 order for an agreement to be comparable, you have to

13 have enough information so you don't speculate.

14   And when it comes to license -- sorry, when it

15 comes to settlement agreements, there's not enough

16 information, and you're left with speculating.

17   Q.   Did you hear the video testimony yesterday

18 from Mr. Sarkissian that the MeterFlow inventors were

19 working with Cisco?

20   A.   Yes, I did.

21   Q.   And what does that tell you about the Cisco

22 settlement?

23   A.   So that's -- that's -- that's an example of a

24 situation where you just don't know what is happening

25 when they settle a lawsuit. So all we know is the --

1 that Cisco was working directly with the inventors.

2 They were working on it with the technology or for the

3 technology, on the technology for the MeterFlow software

4 for MeterFlow. And then several years later, many years

5 later, they get sued. So -- and then they settled the

6 lawsuit.

7   We don't know what was going on there. We

8 have no idea, so we would have to speculate.

9   In addition to that, what we do know is that's

10 very different than the situation for Sandvine.

11 Sandvine was not working with the inventors. So it's a

12 very separate, very different situation there. And --

13 and we would -- again, I -- we would have to speculate

14 as to what happened there.

15   Q.   What is the royalty rate that was applied in

16 the Cisco settlement?

17   A.   I don't know. There -- there wasn't one.

18   Q.   What is the royalty base that was used in the

19 Cisco settlement?

20   A.   Again, I don't know because there wasn't one.

21   Q.   Why does it matter that the royalty rate and the

22 royalty base in the Cisco settlement are unknown?

23   A.   You have to have a starting point. And if you

24 don't have a starting point, then you can't make any

25 adjustments. So you need to have either a royalty rate

1 or a royalty base in order to make those adjustments.

2   Q.   Is there any other evidence of unreliability

3 that you've seen with respect to Mr. Bergman's analysis

4 of the Cisco settlement?

5   A.   Yes, there's -- there's a couple that -- that

6 jump right out.

7   The first one is his results. So he concluded

8 that the total value would be $13.89 million based on

9 the Cisco settlement agreement.

10   If you apply that or take into account the

11 royalty base, which he agreed would be 114 million, that

12 implies the royalty rate is over 12 percent.

13   He already testified that he thinks the

14 reasonable royalty is 3 percent. So that's four times

15 greater than what he already said is a reasonable

16 royalty.

17   Q.   Let me -- let me stop you there, Ms.

18 Stuckwisch.

19   A.   Uh-huh. Uh-huh.

20   Q.   Why is the market share analysis in Mr.

21 Bergman's analysis unreliable?

22   A.   Yeah. So this is -- this is the 40 percent

23 that he talked about, and then he gave an example about

24 a pizza and the different slices in the pizza.

25   So what he was saying is that as long as he

1 knew the relative market share between Sandvine and

2 Cisco, that's all he needed to know.

3   Well, the problem is the market share that

4 he's relying on is not the market share for the accused

5 products. It has nothing to do with the accused

6 products.

7   So the data he relied on, if you look at some

8 of the underlying documents, it actually shows very

9 clearly that the numbers for the market share for

10 Sandvine are total company revenue. So it's total

11 company revenue for Sandvine compared to Cisco's SCE

12 products. Right. Those were the products that -- that

13 we believe include this -- include similar technology,

14 and those were the accused products in the Cisco

15 litigation.

16   So the underlying document, as an example, in

17 2010, what it showed was Mr. Bergman relied on market

18 share of about 24 percent for Sandvine. And if you look

19 at the document, it actually shows how they calculated

20 that 24 percent. The revenue for Sandvine in that

21 calculation was $89 million. We know that's not the

22 2010 accused products because 2010 accused products is

23 only 11.9 million.

24   So 89 million is almost eight times greater.

25 I think it's 760 percent greater. The -- and -- and, in

1 fact, that actually equals their total company revenue

2 in 2010. So I know it's the company revenue in 2010.

3   Cisco, the same document, the percent market

4 share was 19 percent. The underlying number in that for

5 Cisco was $71 million.

6   Now, I don't know if it was just accused

7 products, but it was labeled Cisco SCE, which, again,

8 was the accused product in the -- in the Cisco

9 litigation, and I know it's not company-wide revenue for

10 Cisco, because in 2010, Cisco had revenue of $40

11 billion.

12   Q.   All right. Ms. Stuckwisch, let me stop you

13 there.

14   In light of all the evidence that you've seen

15 in this case, is there enough information to do a

16 reliable and non-speculative comparison with the Cisco

17 settlement?

18   A.   No, absolutely not.

19   Q.   Did you hear Mr. Bergman describe the income

20 approach analysis?

21   A.   Yes, I did.

22   Q.   What is the income approach?

23   A.   The income approach is another method to value

24 an asset. If I go back to using a house as an example,

25 in the income approach, if we were valuing a house, we

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 1  would look at rent being -- if you rented out the house.
 2              So you would look at all the rent for the
 3  lifetime of the house, you would sum all of that up, and
 4  then you would deduct expenses to maintain your home.
 5              So you get net income, so you get a stream of
 6  net income that is being generated by the house by
 7  renting it out.
 8              And then because a dollar today is worth more
 9  than a dollar tomorrow, you'd bring all that revenue to
10  today's dollars, and that gives you your value for the
11  house based on a lifetime of rent.
12       Q.    Does the income approach work in this case?
13       A.    No, it does not.
14       Q.    Why not?
15       A.    When you're valuing a patent and you use the
16  income approach, you have to separate the value of the
17  patented technology separate from the revenue of the
18  entire product.  So if I use another example as a house,
19  what we would be trying to do, so if we have all the --
20  if we're renting out the house, we know the revenue
21  that's being generated by renting out the house, but
22  instead of trying to value the entire house, we're
23  trying to value a fireplace in the living room that's
24  connected to the wall with a chimney and everything, now
25  we have to figure out how to separate the revenue that's
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 1 being generated by the fireplace separate from the rest

 2 of the house.

 3   And in this case, we just can't do that with

 4 this technology.

 5   Q.   Is there any evidence of unreliability that

 6 you have seen with respect to Mr. Bergman's income

 7 approach analysis?

 8   A.   Yes, there is.

 9   Q.   Can you give me some examples, please?

10   A.   I can. So, again, looking at his results, he

11 concluded that based on the income approach, the value

12 would be $13.49 million. Again, if you take into

13 account the royalty base of $114 million, you would have

14 an implied royalty rate of almost 12 percent, it's just

15 under 12 percent. Again, that is four times greater

16 than what he are already said was a reasonable royalty

17 of 3 percent and six times greater than the starting

18 point from the Exar-Hi/Fn agreement of 2 percent. It

19 just doesn't make any sense.

20   Q.   Did Mr. Bergman rely on margin data from

21 companies other than Sandvine?

22   A.   Yes, he did. So when he did his income

23 approach, he relied on data from Dell and HP, and that's

24 just -- that's just inappropriate speculating.

25   Q.   And what is the fact that Mr. Bergman had to

1 rely on Dell and HP data tell you about the reliability

2 of his income approach analysis?

3   A.   It's -- it's unreliable.

4   MR. KEAN: Mr. Palisoul, if you'll please

5 present the next slide.

6   Q.   (By Mr. Kean) Ms. Stuckwisch, if the jury

7 finds infringement in this case, what tools do they need

8 in order to do an accurate patent valuation?

9   A.   So, first, you need to identify the right

10 comp. Once you have the right comp, then you need to

11 identify and make appropriate adjustments, so you end up

12 with the proper royalty rate. And then when you have

13 the royalty rate, you multiply that times the

14 appropriate royalty base to get the total value.

15   MR. KEAN: And, Mr. Palisoul, if you'll

16 please put up the next slide.

17   Q.   (By Mr. Kean) Ms. Stuckwisch, can you tell

18 the jury what numbers they need to know to get to the

19 right answer on damages if they find infringement in

20 this case?

21   A.   Yes. So, again, first step, start with the

22 right comparable. Mr. Bergman and I both agree the

23 proper starting point, the right comp, is the Exar-Hi/Fn

24 acquisition. The starting point in that agreement was 2

25 percent. So that's where we start.

1   The next step is to make adjustments to that.

2 Now, I've talked about reasons why I think it should be

3 adjusted downward. Started out with the 43 patents.

4 Ultimately, we're getting to three patents. And then

5 there were other adjustments from Georgia-Pacific

6 factors, you know, those other license agreements for

7 MeterFlow, Exar-Hi/Fn acquisition -- that was an

8 acquisition, so you're buying the technology not just

9 licensing it.

10   Q.   Okay. Let me interject with a question.

11   If you apply that rate to the royalty base of

12 $114.4 million, what number does that give you here?

13   A.   So when you multiply the .75 times the

14 appropriate base of 114 million, you end up with a total

15 value of 858,000.

16   Q.   Ms. Stuckwisch, if the jury concludes that

17 Sandvine is not infringing, what should the damages be

18 in this case?

19   A.   So, again, then it's -- then it's no damages.

20   Q.   Thank you very much.

21   MR. KEAN: I pass the witness, Your

22 Honor.

23   THE COURT: All right. Cross-examination

24 by the Plaintiff.

25   MR. DAVIS: Yes, Your Honor.

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 1                    THE COURT:   Proceed.

 2                    CROSS-EXAMINATION

 3  BY MR. DAVIS:

 4       Q.    Good morning, Ms. Stuckwisch.

 5       A.    Good morning.

 6       Q.    My name is Bo Davis.   We've never met before.

 7  It's good to meet you.

 8       A.    Nice to meet you, too, sir.

 9       Q.    Ms. Stuckwisch, how many exhibits did you show

10  the jury --

11                    MR. DAVIS:   Oh, I'm sorry.   May I pass

12  out some binders, please, Your Honor?

13                    THE COURT:   You have leave to distribute

14  your binders.

15                    MR. DAVIS:   Thank you, Your Honor.

16                    May I proceed, Your Honor?

17                    THE COURT:   You may.

18       Q.    (By Mr. Davis)   Ms. Stuckwisch, how many

19  exhibits did you show the jury during your direct

20  examination?

21       A.    I think there were two exhibits and two

22  additional demonstratives.

23       Q.    Thank you.   Now, you rely on the Duff & Phelps

24  Exar-Hi/Fn agreement to identify an initial potential

25  royalty rate of 2 percent; is that correct?
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1   A.   That's correct.

2   Q.   And after you obtained the initial 2 percent

3   from the Exar-Hi/Fn agreement, you considered the

4   Georgia-Pacific factors, and then you further decreased

5   that rate; is that right?

6   A.   That's correct.

7   Q.   Now, in this case, Sandvine has offered no

8   non-infringing alternatives to the patented technology;

9   is that correct?

10   A.   That's my understanding, yes.

11   Q.   Okay. And non-infringing alternatives are one

12 of the things that you should consider in determining

13 what a reasonable royalty damages amount should be; is

14 that right?

15   A.   Sure. That's in one of the Georgia-Pacific

16 factors.

17   Q.   And you did not increase your proposed royalty

18 rate based on the absence of a non-infringing

19 alternative, did you?

20   A.   The end result, I did not adjust -- I did not

21 adjust upward, no, that's correct.

22   Q.   And you heard Mr. Bergman testify when he

23 considered the non-infringing alternatives, do you

24 remember the -- he considered the well-known port

25 technology?

1   A.   Yes, I recall that.

2   Q.   He considered the difference and the -- and

3 the success rates between the well-known port technology

4 and the patented technology. Do you recall that?

5   A.   Yes, I do.

6   Q.   And he found that the patented technology had

7 higher success rates. Do you recall that?

8   A.   I do.

9   Q.   And because they had higher success rates, he

10 adjusted his calculation to account for that; is that

11 right?

12   A.   I believe that's what he did, yes.

13   Q.   And you did not account for the fact that

14 there were no non-infringing alternatives in this case

15 at all, did you?

16   A.   I can't agree with that.

17   Q.   Okay. You didn't adjust your rate downward,

18 did you? I'm sorry, you didn't adjust your -- your rate

19 upward based on the lack of non-infringing alternatives,

20 did you?

21   A.   Again, that -- it's one of the considerations.

22 The end result is to adjust downward, but I still

23 considered it.

24   Q.   Okay. Now, other than mentioning the fact

25 that Sandvine has not identified any non-infringing

1 alternatives, your opinion does not address

2 non-infringing alternatives at all, correct?

3   A.   I'm not sure I understand -- I'm not sure I

4 understand that question.

5   Q.   Okay. Well, you didn't perform any analysis

6 to -- I'm sorry.

7   You did not address the non-infringing

8 alternatives in your report, is that -- is that what I

9 understand?

10   A.   I can't recall if I said that there weren't

11 any, but I did not include any non-infringing

12 alternatives.

13   Q.   Okay. Now, part of your opinion is based on

14 the assumption that the patents-in-suit don't provide

15 any advancement over the prior art; is that correct?

16   A.   No, I can't agree with that, sir.

17   Q.   Well, do you -- you don't recall making a

18 statement like that in your expert report?

19   A.   Could you repeat the question? I --

20   Q.   Sure. Your opinion is based on the assumption

21 that the patents-in-suit do not represent an advancement

22 over the prior art.

23   A.   I think as a part of the Georgia-Pacific

24 factors, I was citing our technical expert's opinion

25 related to that.

 1   Q.   Right. And in your report, you said that you

 2 understood that Dr. Nettles was going to testify that

 3 the patents-in-suit don't provide any benefit over the

 4 prior art. That's what you said in your report; is that

 5 right?

 6   A.   That's correct.

 7   Q.   You were here in the courtroom when Dr.

 8 Nettles testified?

 9   A.   Yes, I was.

10   Q.   He didn't testify about that, did he?

11   A.   Not that I recall. I don't recall one way or

12 the other.

13   Q.   You don't remember?

14   A.   I don't remember.

15   Q.   Your report was based on the fact that you

16 were expecting him to say that, right?

17   A.   That's correct.

18   Q.   And you don't -- you weren't listening for him

19 to say that?

20   A.   I -- I was -- I was listening to the

21 testimony. I don't remember if I heard those -- that

22 specific opinion or not. I don't recall one way or

23 another.

24   Q.   Well, I was listening to the testimony, as

25 well. I was waiting for him to say it, and I never

 1 heard him say it.

 2   THE COURT: Is that a question, Counsel?

 3   MR. DAVIS: Yes, Your Honor.

 4   Q.   (By Mr. Davis) Did you hear him say it?

 5   A.   As I said, I -- I can't remember one way or

 6 another.

 7   Q.   Okay. Now, at the time that you wrote your

 8 report and you said that Dr. Nettles was going to

 9 testify that there was no advancement over the prior

10 art, you had not seen Dr. Nettles' report; is that

11 correct?

12   A.   That's correct.

13   Q.   And -- well, your understanding of what Dr.

14 Nettles was going to testify came from your attorneys,

15 correct?

16   A.   That's correct.

17   Q.   Okay. So you were informed by counsel for

18 Sandvine that that's what Dr. Nettles would say?

19   A.   That's correct.

20   Q.   And, again, Dr. Nettles didn't say that

21 yesterday, at least as far as what you can recall?

22   A.   Correct, I don't recall.

23   Q.   And if I understand your report, correctly,

24 you used the fact that Dr. Nettles was going to come in

25 here and testify that there was no non -- no advancement

1 over the prior art as a basis to adjust your rate

2 downward; is that right?

3   A.   That's -- that's one of many factors, yes.

4   Q.   And that never happened, so at least with

5 respect to that adjustment downward, you should not have

6 made that adjustment, correct?

7   A.   I can't agree with that.

8   Q.   Okay. Well, at least as far as what you

9 expected him to testify about, you can't base your

10 adjustment on that?

11   A.   Base it on -- I'm sorry, can you repeat the

12 question?

13   Q.   Sure. In your report, you said you were

14 basing your downward adjustment on Dr. Nettles'

15 testimony that he would offer at trial, correct?

16   A.   Yes, that was one part of the -- of that

17 factor. There's other pieces of the factor.

18   Q.   Well, that's at least a part of it, right?

19   A.   Yes.

20   Q.   And so for that part of it, since he never

21 testified at trial to the -- as you thought he would,

22 that part of it should not have been adjusted downward,

23 correct?

24   A.   I can't agree with that.

25   Q.   Okay. And you never talked to Dr. Nettles

 1 directly, correct?

 2   A.   Not before I issued my report, no.

 3   Q.   And you were able to call him and talk to him,

 4 weren't you?

 5   A.   I didn't have his contact information, but --

 6   Q.   If you had asked counsel for it, they could

 7 have given it to you, right?

 8   A.   I would imagine so, yes.

 9   Q.   Now, if -- if the jury believes that the

10 patented technology does represent an advancement over

11 the prior art, that they would need to then adjust the

12 rate upward; is that correct?

13   A.   No, that's -- that's not necessarily correct.

14   Q.   Now, you reviewed Dr. Almeroth's opinions

15 before performing your -- your -- before giving your

16 opinions in this case, correct?

17   A.   Yes, that's correct.

18   Q.   And you were aware, based on your review of

19 Dr. Almeroth's report, that he de -- he detailed the

20 tech -- technological value of the patents-in-suit to

21 Sandvine; is that right?

22   A.   That was in his report, yes.

23   Q.   And do you recall from Dr. Almeroth's

24 testimony when he talked about the benefits of the

25 invention in traffic classification?

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 1        A.    Yes, I do.

 2        Q.    And he talked about the benefits of the

 3  invention in quality of service?

 4        A.    Yes, I do.

 5        Q.    And he talked about the benefits of the

 6  invention in network security?

 7        A.    Yes.

 8        Q.    But you didn't consider Dr. Almeroth's

 9  opinions before forming your opinions in making a

10  downward adjustment; is that correct?

11        A.    I -- I'm sorry, sir, I can't -- I can't agree

12  with that.

13        Q.    Okay.  You just disagree with Dr. Almeroth, is

14  that -- is that what I understand?

15        A.    No, that's not what I said either.  I'm happy

16  to explain my answer if you'd like.

17        Q.    Well, you know that Dr. Almeroth provided

18  evidence of the benefits of the tech -- of the patented

19  technology, do you understand that?

20        A.    I reviewed his expert report, and I understand

21  that there was -- he had opinions about that.

22        Q.    Do you agree with his opinions?

23        A.    I'm not a technical expert.

24        Q.    Right.  You're not a technical expert.  So you

25  don't have the information or the classifications or the
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 1  certifications to be able to evaluate whether Dr.

 2  Almeroth's opinions or correct or not; is that right?

 3       A.   That's correct.

 4       Q.   Okay.  And you relied on Dr. Nettles and what

 5  he was going to testify about to form your opinions that

 6  you disagreed with Dr. Almeroth?

 7       A.   Again, can you clarify, we're talking about

 8  one portion of one of the Georgia-Pacific factors, is

 9  that what we're still talking about?

10       Q.   No, ma'am.  I'm just asking if you have --

11  well, let me just start over.

12            Were you in the courtroom yesterday morning

13  for opening statements -- I'm sorry, two mornings ago?

14       A.   Yes, I was.

15       Q.   And you heard -- and you also heard Dr.

16  Nettles testify, right?

17       A.   Yes, I did.

18       Q.   Do you remember when Mr. Skiermont in opening

19  statement showed the cover page to the patent-in-suit?

20       A.   Yes.

21       Q.   And do you recall when he read that the cover

22  page to the patent says that the director of the United

23  States Patent and Trademark Office has received an

24  application for a patent for a new and useful invention?

25       A.   Yes.
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 1        Q.    And so at least the Patent Office believed

 2  that the inventions in the patents were new and useful;

 3  is that right?

 4        A.    The document speaks for itself.

 5        Q.    And that means that they represent an

 6  advancement over the prior art; is that correct?

 7        A.    I'm sorry, sir, I can't -- I can't agree with

 8  that.

 9        Q.    And did you account for the fact that the

10  Patent Office issued the patents, in your opinion?

11        A.    That is -- as a part of being a damages

12  expert, I assume in -- I assume infringement, and I

13  assume validity of the patents, which means I'm assuming

14  they are valid patents.  Otherwise, they would just --

15  would be zero, so yes, I assume that.

16        Q.    Okay.  Thank you.

17              Do you recall when Mr. Caputo testified?

18        A.    Yes, I do.

19        Q.    And do you recall when Mr. Skiermont showed

20  him PTX-344?

21                  MR. DAVIS:  Could we have PTX-344,

22  please, Ms. Vogtman.

23        Q.    (By Mr. Davis)  Do you remember this slide at

24  all?

25        A.    Yes.
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 1        Q.    So this is an internal training document.   Do
 2  you have any reason to disagree with that?
 3        A.    I have no opinion one way or the another.
 4        Q.    And in this document, it says that one of the
 5  hurdles that must be overcome before traffic
 6  classification can be applied is associating related
 7  flows and sessions, do you see that?
 8        A.    I see that.
 9        Q.    And you reviewed this document in your report;
10  is that right?
11        A.    Yes, I believe so.
12        Q.    And the way to relate flows is one of the
13  aspects of the patent-in-suit that Dr. Almeroth
14  discussed yesterday; is that right?
15        A.    I believe he did discuss that, yes.
16        Q.    Okay.   In preparing for your opinions in this
17  case, did you review Mr. Brunell's deposition testimony?
18        A.    Yes, I did.
19        Q.    And, therefore, you're aware that Packet
20  Intelligence had a policy with respect to licensing
21  intellectual property?
22        A.    I -- I recall -- I recall some testimony
23  around that.   I -- do you have a more --
24        Q.    Well, you recall --
25        A.    I recall -- I recall the testimony.
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 1                    THE COURT:  One at a time, please.

 2                    MR. DAVIS:  Yes, Your Honor.

 3                    THE COURT:  That applies to both of you.

 4  Wait until the other one is finished.

 5                    THE WITNESS:  Yes, sir.

 6                    MR. DAVIS:  Yes, Your Honor.

 7                    THE COURT:  Go ahead.

 8        Q.   (By Mr. Davis)  You're aware Mr. Brunell

 9  testified that Packet Intelligence would not accept a

10  royalty rate of less than 2 and a half percent; do you

11  recall that?

12        A.   I do recall that.

13        Q.   Did you account for that in your valuation of

14  what a reasonable royalty should be in this case?

15        A.   I did account for that.

16        Q.   And yet you offered a reasonable royalty rate

17  of much less than two and a half percent, correct?

18        A.   That is correct.

19        Q.   You don't have any evidence to dispute the

20  fact that Packet Intelligence would not agree to a

21  reasonable royalty rate of less than two and a half

22  percent, do you?

23        A.   No, I don't -- I don't have any specific

24  evidence, no.

25        Q.   And it's important to consider a company's
```

 1 | licensing policy in the determination of a reasonable

 2 | royalty?

 3 | A.   Both -- both companies, yes.   That's just one

 4 | party.

 5 | Q.   Now, in your opinion, you take the 2 percent

 6 | from the Exar-Hi/Fn agreement, you make adjustments

 7 | downward to .75; is that correct?

 8 | A.   That's correct.

 9 | Q.   And then you multiply that number times a

10 | royalty base of $114 million; is that right?

11 | A.   That's correct.

12 | MR. DAVIS: And, Ms. Vogtman, if I could

13 | have Slide 1, please.   Slide 1 of my -- my slides,

14 | please.

15 | Q.   (By Mr. Davis) So what I'm showing here on

16 | the screen is your royalty rate of .75, do you see that?

17 | That's your royalty rate?

18 | A.   Yes.

19 | Q.   Okay.   And 114 million, that's the base,

20 | correct?

21 | A.   Yes.

22 | Q.   And the .75 -- well, the -- strike that.

23 | The $114 million, that represents the amount

24 | of gross revenue that Sandvine has made for the accused

25 | products for -- up and from 2010 up until 2017; is that

```
 1  correct?

 2       A.    That's correct.

 3       Q.    And you and Mr. Bergman at least agree

 4  partially that that is -- that is one place to --

 5  that -- that -- that is an appropriate base; is that

 6  correct?

 7       A.    The -- yes, 114 is the correct base, that's

 8  correct.

 9       Q.    114 million is the correct base.  And it's the

10  correct base for royalty up to the time of trial,

11  correct?

12       A.    It's the correct base.

13       Q.    Up until the time of trial?

14       A.    Well, the revenue is up through the time of

15  trial, that's right.

16       Q.    That $114 million does not account for any

17  future sales; is that right?

18       A.    Correct?

19       Q.    And the patents don't expire until 2022; is

20  that right?

21       A.    That's correct.

22       Q.    Okay.  So if we're going to use $114 million

23  as the base, the number that results from that will only

24  be up until the time of trial?

25       A.    That's correct, that's the value.
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```
 1        Q.    And if we're going to account for all of the
 2 sales through the life of the patent, we need to include
 3 future revenue; is that right?
 4        A.    I can't answer that, I'm sorry.
 5        Q.    Okay.  Well, the patents don't expire for an
 6 another few years, right?
 7        A.    That's correct.
 8        Q.    And if Sandvine is going to continue using the
 9 patents for the next few years, they should pay
10 something for it, right?
11        A.    That, again -- again, I'm sorry, I can't -- I
12 can't answer that question.
13        Q.    Okay.  Let's talk about the .75 percent and
14 how you -- how you got to that number.
15              MR. DAVIS:  If I could have Slide 5,
16 please, Ms. Vogtman.
17        Q.    (By Mr. Davis)  Now, my understanding is that
18 you took the Hi/Fn-Exar 2 percent, and you looked at all
19 15 of the Georgia-Pacific factors, and you determined
20 that that rate should be .75 percent as a result; is
21 that correct?
22        A.    That's correct.
23        Q.    Okay.  And let's look at the first factor.
24 Would you agree with me that the first factor is not
25 really applicable in terms of whether to adjust the
```

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 1  2 percent up or down?

 2       A.   That's correct.

 3       Q.   Okay.  And then in the second factor,

 4  compare -- comparable rates for other comparable

 5  patents, you would agree with me that that factor is

 6  neutral?

 7       A.   Yes, I believe so.

 8       Q.   And I've indicated in trial -- this slide by

 9  the arrow -- the horizontal arrow pointing both ways.

10            Do you see that?

11       A.   Yes.

12       Q.   The next factor you looked at is the nature

13  and scope of the license, and based upon your analysis

14  of that factor, you determined that there should be a

15  downward adjustment?

16       A.   That's correct.

17       Q.   In your analysis under that factor, you didn't

18  provide any quantitative metrics for how much to adjust

19  that factor downward, did you?

20       A.   That's correct.

21       Q.   No numbers?

22       A.   That's correct.

23       Q.   You just said downward?

24       A.   That's correct.  These are qualitative

25  factors.
```

1   Q.   Okay.   And you didn't cite to any evidence

2 that would indicate the amount of downward adjustment

3 that should occur under the third factor, correct?

4   A.   The specific amount, no, that's correct.

5   Q.   Okay.   And No. 4, patent owner's willingness

6 to license, you, again, looked at that, and you thought

7 that Factor 4 indicated another downward adjustment; is

8 that right?

9   A.   That's correct.

10   Q.   And, again, you didn't provide any

11 quantitative numbers to make that adjustment, correct?

12   A.   That's correct.

13   Q.   And really could we agree, instead of going

14 through each one of them, that for each of the -- the

15 Factors 7 through 14, you made downward adjustments, and

16 for none of those factors did you provide any

17 quantitative analysis as to how much of a -- of a

18 downward adjustment should be made under the particular

19 factor?

20   A.   That's correct.

21   Q.   Okay.   Now, I believe it's your opinion in

22 this case that the Cisco agreement is not comparable,

23 correct?

24   A.   Correct.

25   Q.   Now, the Cisco agreement involved Packet

```
 1  Intelligence, didn't it?

 2        A.    Yes.

 3        Q.    And the party -- one of the parties to the

 4  hypothetical negotiation is Packet Intelligence, right?

 5        A.    That's correct.

 6        Q.    Okay.  The Cisco agreement involves Cisco,

 7  correct?

 8        A.    Correct.

 9        Q.    And Cisco and Sandvine are competitors?

10        A.    Yes.

11        Q.    Okay.  They sell similar products?

12        A.    Some of their products, sure.

13        Q.    And some of their products are sold in the

14  same market, right?

15        A.    Correct.

16              MR. DAVIS:    In fact, Ms. Vogtman, if I

17  could have Slide 7.

18        Q.    (By Mr. Davis)  We've seen this document --

19  this slide a number of times showing these two

20  documents, PTX-339 and 340.  And we've seen how Sandvine

21  views its products with respect to Cisco products.  And

22  Sandvine says:  The PTS does everything the Cisco SCE

23  2000 does and more.

24              Correct?

25        A.    That's what it says, yes.
```

 1   Q.   And below that in PTX-340, it says: The PTS

 2 does everything that a Cisco SCE 8000 does and more.

 3   Correct?

 4   A.   You read that correctly.

 5   Q.   Thank you. So we do note that with respect to

 6 the products that were at issue in the Cisco agreement

 7 and the products that are at issue in this case, they're

 8 similar, correct?

 9   A.   Correct.

10   MR. DAVIS: You can take that down, Ms.

11 Vogtman, if you would, please.

12   Q.   (By Mr. Davis) We also know that -- in the

13 market, that Sandvine and Cisco compete in, Sandvine is

14 bigger?

15   A.   I disagree.

16   Q.   You disagree. You disagree that Sandvine is

17 bigger in the relevant market?

18   A.   Yes. Based on the underlying documents, the

19 market share for Sandvine is based on total company

20 revenue. And the documents for Cisco, it's for Cisco

21 SCE products.

22   Q.   Now, even though you don't believe that the

23 Cisco agreement is comparable, you did do an analysis

24 under that -- under that agreement, correct?

25   A.   I analyzed all of Mr. Bergman's calculations,

 1 including his calculation under the Cisco agreement.

 2   Q.   But you provided your own analysis under the

 3 Cisco agreement, didn't you?

 4   A.   That's not -- that's not exactly correct. It

 5 was for illustration purposes only. That's clearly --

 6   Q.   So it's only for illustration purposes?

 7   A.   It's in response to Mr. Bergman's analysis.

 8   Q.   Okay. But you did an analysis under the Cisco

 9 agreement, correct?

10   A.   As an illustration in my response to Mr.

11 Bergman.

12   MR. DAVIS: Could we have Page 16 of Ms.

13 Stuckwisch's supplemental expert report, please? I need

14 the supplemental report, please. Thank you. If you

15 could blow up the top portion above conclusion.

16   Q.   (By Mr. Davis) So in your second supplemental

17 report, for illustration purposes only, you provided a

18 reasonable royalty analysis based upon the -- the Cisco

19 agreement, correct?

20   A.   That's correct.

21   Q.   And as part of this analysis, you accepted,

22 for illustration, that Mr. Bergman's assertion that the

23 Cisco agreement is comp -- is a comparable license, and

24 you accepted the other assertions and assumptions

25 included in his report, correct?

1   A.   No, sir, that's not correct.

2   Q.   Okay. Now, the first line of this -- in this

       REDACTED BY ORDER OF THE COURT
3 analysis is the ███████ ████████.   Do you see that?

4   A.   Yes, I do.

5   Q.   The second line in this analysis is the

6 allocation to foreign sales. Do you see that?

7   A.   Yes, I do.

8   Q.   Now, in this analysis, you assigned 68.8

9 percent. Do you see that?

10   A.   Yes, I do.

11   Q.   Mr. Bergman used 35.9 percent, correct?

12   A.   Correct.

13   Q.   And the 68.8 percent is the high end of what

14 Mr. Bergman considered to be Cisco's entire worldwide

15 foreign sales, right?

16   A.   Correct.

17   Q.   And if you remember, in Mr. Bergman's direct,

18 he talked about the fact that for the foreign patents,

19 Packet Intelligence had patents only in certain juris --

20 foreign jurisdictions. Do you remember that?

21   A.   Yes, I do.

22   Q.   You remember the map with the blue shading for

23 the countries that had -- that Packet Intelligence had

24 patents in?

25   A.   Yes.

```
 1        Q.    Okay.  And so you understand, based on Mr.

 2   Bergman's testimony, that Packet Intelligence does not

 3   have worldwide patent coverage?

 4        A.    Yes, I understand that's his testimony.

 5        Q.    Okay.  You understand that -- that Packet

 6   Intelligence doesn't have coverage in Canada, for

 7   example?

 8        A.    I believe that's correct.

 9        Q.    Or in South Korea?

10        A.    Correct.

11        Q.    Or in South America?

12        A.    I believe that's correct.

13        Q.    Or a lot of other countries, correct?

14        A.    Correct.

15        Q.    And your corrected analysis here where you use

16   68.8 percent doesn't take into account the fact that PI

17   has patents in only certain foreign jurisdictions; is

18   that right?

19        A.    No, I can't agree with that.

20        Q.    Your corrected analysis allocates $13.42

21   million to Packet Intelligence's foreign patents; is

22   that right?

23        A.    That's what the math shows.

24        Q.    Okay.  And the next line is the allocation to

25   the integrated market.  Do you see that?
```

```
 1        A.    Yes, I do.

 2        Q.    And here you have an allocation amount of 27.3

 3  percent.   Do you see that?

 4        A.    Yes, I do.

 5        Q.    And this is the same amount that Mr. Bergman

 6  used?

 7        A.    That's correct.

 8        Q.    So you don't have any dispute about that part

 9  of it?

10        A.    No, I can't agree with that, sir.

11        Q.    So at least you assumed that that amount was

12  correct for purposes of your analysis here?

13        A.    I used the same number here for illustration

14  purposes.

15        Q.    And this takes the settlement down to $4.42

16  million, correct?

17        A.    That's correct.

18        Q.    And the next line is the allocation to

19  non-asserted patents.   Do you see that?

20        A.    Yes, I do.

21        Q.    And this is the U.S. non-asserted patents?

22        A.    That is correct.

23        Q.    And you understand that -- that these patents

24  are the non-asserted U.S. Dietz patents, correct?

25        A.    Correct.
```

```
 1        Q.    And it also includes the three non-Dietz U.S.

 2   patents, correct?

 3        A.    That is correct.

 4        Q.    And you were here when Mr. Bergman described

 5   the discussion that he had with Dr. Almeroth about --

 6   that there were no -- that there were no incremental

 7   benefits to the non-asserted Dietz patents?

 8        A.    I heard that's what he said.

 9        Q.    Okay.  And Mr. Bergman also stated that in

10   those discussions with Mr. -- Dr. Almeroth and with

11   Packet Intelligence, that Packet Intelligence stated

12   that they didn't believe any of these patents added any

13   incremental value to the litigation beyond what was

14   already asserted, do you recall that?

15        A.    Yes, I recall that was what Mr. Bergman said.

16        Q.    Okay.  And then he also stated that in those

17   discussions, Packet Intelligence stated that they didn't

18   think that Cisco even used the non-asserted Dietz

19   patents, right?

20        A.    I recall that testimony, yes.

21        Q.    And you don't have any reason to dispute that

22   any of this is true, correct?

23        A.    Meaning -- meaning what is true?  I'm sorry.

24        Q.    Everything we just went through.

25        A.    Based on -- I'm sorry, so you're asking me
```

 1 about Mr. Bergman's testimony, if I have any reason to

 2 believe that it's not true?

 3   Q.   Correct.

 4   A.   Just specific to the non-U.S. patents?

 5   Q.   That's correct?

 6   A.   I disagree with that. I do have evidence.

 7   Q.   And Dr. Nettles, he didn't dispute it, did he?

 8   A.   I don't believe so.

 9   Q.   Okay. Your corrected analysis assigns a 60

10 percent allocation to the non-asserted patents, correct?

11   A.   That's correct.

12   Q.   60 percent?

13   A.   That's correct.

14   Q.   And just to be clear, you assigned more weight

15 to the non-asserted patents than the patents that were

16 actually at issue in this case, didn't you?

17   A.   Yes, I did.

18   Q.   The next line in this allocation is the

19 difference in the estimated litigation cost. Do you see

20 that?

21   A.   Yes, I do.

22   Q.   And for this allocation, you used the same

23 number as Mr. Bergman, correct?

24   A.   Yes, I did.

25   Q.   And in the final line is the Sandvine market

```
 1  share over Cisco, do you see that?

 2       A.    Yes, I do.

 3       Q.    And on this you have 5.5 percent?

 4       A.    That is correct.

 5       Q.    And this allocation is what you to be -- you

 6  view to be a corrected market share number versus Mr.

 7  Bergman's 40.9 percent?

 8       A.    That's correct, using the same information

 9  that he did, yes.

10       Q.    And if we were to -- to put Mr. Bergman's

11  slide up where he listed all the steps he went through

12  in his Cisco analysis, this would have been the last

13  entry on his slide where he adjusted the market 40

14  percent -- or adjusted the value 40 percent upward to

15  account for Sandvine's greater market share, right?

16       A.    That's correct.

17       Q.    So he offered 40 percent increase, you offer a

18  5.5 percent increase?

19       A.    I just corrected his calculation, and it

20  results in 5.5.

21       Q.    Right.  Now, you recall that Mr. Bergman

22  determined that Sandvine's market share to be an average

23  of 18.8 percent, do you recall that?

24       A.    Yes, I do.

25       Q.    And Mr. Bergman determined that Cisco's market
```

 1 share to be an average of 13.5 percent, do you remember

 2 that?

 3   A.   Yes, I do.

 4   Q.   Okay. And is that how you got the 5.5

 5 percent, by subtracting 18.8 from 13.5?

 6   A.   Yes, that's correct.

 7   Q.   Okay. And so if we were to think of the

 8 market share as a piece of pizza?

 9   A.   Yes.

10   Q.   Sandvine's piece of the pizza represents 13.5

11 percent of the whole pizza; is that right?

12   A.   I -- I think you meant Cisco.

13   Q.   Correct. Thank you.

14   If we were to think about it in the pizza

15 example, Cisco's piece of the pizza represents 13.5

16 percent of the whole pizza?

17   A.   That's correct.

18   Q.   And Sandvine's piece of the pizza represents

19 18.8 percent of the whole pizza?

20   A.   That's correct.

21   Q.   Okay. And what you did was to take 18.8 and

22 subtract it from 13.5, correct?

23   A.   That's correct.

24   Q.   And so based on that, it's your opinion that

25 when compared to Cisco, Sandvine is only 5.5 percent

```
 1  bigger than Cisco, right?

 2       A.   No, I can't agree with that the way that you

 3  said that.

 4       Q.   Well, isn't it true that based on their

 5  relative market shares, when compared to each other,

 6  Sandvine is 40 percent -- 40.9 percent larger than

 7  Cisco?

 8       A.   Again, I'm sorry, I can't agree with that.

 9       Q.   You can't agree with me that based on their

10  relative market shares, when compared to each other,

11  Sandvine is 40.9 percent bigger than Cisco?

12       A.   When you -- just when you divide the

13  2 percents, that -- that is correct.

14       Q.   Okay.  Now, one of the items that is not on

15  your corrected chart that was on Mr. Bergman's analysis

16  was the adjustment for litigation risk, right?

17       A.   That's correct.

18       Q.   You didn't account for that?

19       A.   Not in my illustration here.

20       Q.   And that was the adjustment that Mr. Bergman

21  made to take into account the fact that the hypothetical

22  negotiation, like we have in this case, assumes

23  infringement and validity; is that right?

24       A.   That's correct.

25       Q.   And in the Cisco agreement, infringement and
```

1 validity were not known; is that correct?

2   A.   That is correct.

3   Q.   And they weren't assumed to be true, were

4 they?

5   A.   That's correct.

6   Q.   And your corrected analysis does not take that

7 into account?

8   A.   I do not have that line item in my analysis

9 for illustration purposes.

10   Q.   Now, you mentioned the MeterFlow agreements.

11 You didn't use the MeterFlow agreements to arrive at a

12 royalty rate, did you?

13   A.   I considered them as a part of my analysis to

14 come up with the appropriate royalty rate.

15   Q.   You considered them?

16   A.   That's correct.

17   Q.   Okay. I didn't hear you testify on direct

18 about the fact that the MeterFlow agreements are

19 software licenses.

20   A.   I believe I mentioned that they were software,

21 I believe --

22   Q.   Okay.

23   A.   -- I did.

24   Q.   So --

25   A.   I apologize if I didn't.

```
 1        Q.    -- a software license is different from the

 2  hypothetical -- hypothetical negotiation, isn't it?

 3        A.    That's correct.

 4        Q.    Okay.   In a software license, you're licensing

 5  software, correct?

 6        A.    Correct.

 7        Q.    For example, a software license is when you

 8  buy Microsoft Word, you get a license to use that

 9  software, correct?

10        A.    Correct.

11        Q.    Do you know -- well, I'll withdraw that.

12              You didn't testify on direct about what

13  products Fluke was making under that agreement, did you?

14        A.    No, I don't think I mentioned that.

15        Q.    And let me just back up an sec.

16              One of the agreements, the MeterFlow

17  agreements you mentioned, was an agreement with Fluke,

18  correct?

19        A.    That's correct.

20        Q.    And Fluke is a company that makes products in

21  the network monitoring space, correct?

22        A.    That's correct.

23        Q.    Do you know whether or not the Fluke products

24  are similar to the Sandvine products?

25        A.    They're in the same -- they're in the same
```

```
 1  space.
 2       Q.    But you don't know, for example, whether or
 3  not the Fluke products are handheld products?
 4       A.    They are handheld products.
 5       Q.    Oh, they are handheld?
 6       A.    Yes.
 7       Q.    Okay.  Do you -- do you know -- well,
 8  withdrawn.
 9             I didn't hear you testify on direct about how
10  much those handheld Fluke products cost?
11       A.    That's correct, I don't -- I did not mention
12  that.
13       Q.    Another one of the MeterFlow agreements that
14  you mentioned is an agreement with a company called RCS,
15  correct?
16       A.    That's correct.
17       Q.    And in the RCS agreement, you don't know what
18  kinds of products RCS -- RCS made?
19       A.    Correct, I just know they're, again, in the
20  same -- in the same industry.
21       Q.    And you don't know how much they cost?
22       A.    Correct.
23       Q.    And you know that Sandvine's products cost
24  $80,000.00 a unit?
25       A.    Approximately.
```

1   Q.   And if, for example, the RCS products are,

2   again, handheld products, you don't know whether those

3   products cost $200.00 a unit, do you?

4   A.   Correct.

5   Q.   And if the Sandvine products cost 80 or a

6    $100,000.00 and the products in the MeterFlow agreement

7   cost $200, that would be an important difference,

8   wouldn't it?

9   A.   This is why it's a percentage, so you would

10   get more money based on the more expensive product.

11   Q.   But that would be something that you would

12   want to know in terms of evaluating the MeterFlow

13   agreements is whether or not the products are similar,

14   correct?

15   A.   That's a consideration.

16   Q.   Are you aware that one of the MeterFlow

17   agreements you mentioned wasn't even signed?

18   A.   Yes, sir.

19   Q.   And you're aware that if an agreement isn't

20   signed, it's not final, correct?

21   A.   That version, correct.

22   Q.   And one of the agreements included a 25-dollar

23   per unit royalty rate?

24   A.   That's correct.

25   Q.   And you used that number when you accounted

1 for how to evaluate what a reasonable royalty should be

2 in this case?

3   A.   Yes, that's correct.

4   Q.   And you don't know whether that agreement was

5 ever finalized?

6   A.   I believe the Fluke license agreement was

7 signed, and that is the one that had the 25-dollar per

8 unit.

9   Q.   But the RCS agreement, you don't remember that

10 one was signed, do you?

11   A.   Correct.

12   Q.   Okay. And do you know that the patent numbers

13 don't appear anywhere in either the Fluke or the RCS

14 agreement?

15   A.   Correct.

16   Q.   Okay. And none of the experts in this case,

17 Dr. Nettles, nor Dr. Almeroth, testified about the

18 comparability of the products at issue in the MeterFlow

19 agreements, did they?

20   A.   Correct.

21   Q.   None of the experts said that the MeterFlow

22 products or any products in -- or any products that were

23 at issue in the MeterFlow agreements practiced every

24 element of the claims in these patents, correct?

25   A.   Correct.

```
 1        Q.    Now, I heard you describe on direct

 2  examination some of the things that you need to look at

 3  in terms -- to determine comparability.  And I heard you

 4  say that, by way of example, if you were comparing

 5  pieces of property, one of the things you might look at

 6  is are they in the same school district?

 7        A.    That's correct.

 8        Q.    And I think you mentioned that when you're

 9  comparing these two pieces of property, they don't have

10  to be perfect -- perfectly identical, do they?

11        A.    That's correct.

12        Q.    There could be differences; is that right?

13        A.    Yes.

14        Q.    And you would make adjustments for those

15  differences?

16        A.    Correct.

17        Q.    And if you made adjustments for the

18  differences, that would represent a reliable opinion,

19  correct?

20        A.    If you have a starting point.

21        Q.    A couple of the things that I heard you

22  mention in terms of determining comparability are

23  whether the technology is similar; is that right?

24        A.    Yes.

25        Q.    And whether they had the same products; is
```

 1 that right?

 2   A.   Again, doesn't have to be identical.

 3   Q.   Okay. But if they had the same products, that

 4 would be something you would look at to determine

 5 whether they were comparable?

 6   A.   Yes.

 7   Q.   And we know that the Cisco agreement, as we've

 8 already established, has similar technology and similar

 9 products?

10   A.   Yes.

11   Q.   Now, you talked about the Exar/Packet

12 Intelligence acquisition, correct?

13   A.   Yes.

14   Q.   It's not your opinion that the jury should

15 consider the Exar/Packet Intelligence acquisition

16 agreement as a comparable agreement to determine a

17 reasonable royalty in this case; is that right?

18   A.   I'm sorry, I don't agree with that.

19   Q.   You don't have an opinion that the Exar/Packet

20 Intelligence agreement is a comparable agreement in this

21 case?

22   A.   I'm sorry, the Exar/Packet Intelligence,

23 that's correct, I don't have -- I'm -- I do not believe

24 that one is comparable.

25   Q.   And just to remove any confusion, that's the

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 1  agreement where Packet Intelligence acquired the patents

 2  from Exar?

 3       A.    That's correct.

 4       Q.    For $875,000?

 5       A.    That is correct.

 6       Q.    And it's not your opinion that that's

 7  comparable?

 8       A.    That is correct.

 9       Q.    And the Packet Intelligence/Exar acquisition,

10  that was not a hypothetical negotiation, right?

11       A.    That is correct.

12       Q.    And in that agreement, Packet Intelligence was

13  not being accused of infringing the patents that at that

14  time Exar owned, right?

15       A.    That's correct.

16       Q.    And Packet Intelligence, at that time, had not

17  made $114 million off of selling products based on, at

18  that time, Exar's patented technology?

19       A.    That's correct.

20       Q.    And those are very different facts than the

21  hypothetical negotiation in this case, correct?

22       A.    I'm sorry, can you -- can you repeat that?

23  That's --

24       Q.    Sure.   The fact that there was no hypothetical

25  negotiation, the fact that PI was not -- Packet
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1 Intelligence was not being accused of infringement, and

2 the fact that Packet Intelligence had not made any money

3 off of using Exar's patents are very different scenarios

4 than what we have in this hypothetical negotiation,

5 right?

6   A.   Those are different scenarios, yes.

7   Q.   Ms. Stuckwisch, if -- if you and I were going

8 to share a pizza and there's 10 slices of pizza in that

9 pizza -- would you assume that with me, please?

10   A.   Sure.

11   Q.   And would you assume that I'm going to eat one

12 piece of pizza and you're going to eat two pieces of

13 pizza.

14   A.   Okay.

15   Q.   And would you assume with me that we're going

16 to pay for the price of that pizza based on how much

17 pizza we ate. Can you assume that with me?

18   A.   Sure.

19   Q.   Okay. And if we made that assumption and

20 you've eaten two pieces of pizza, I've eaten one, you've

21 eaten twice as much pizza as me, correct?

22   A.   That's correct.

23   Q.   And that's a hundred percent difference,

24 right?

25   A.   Just for those two -- those pieces, yes,

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 1  that's correct.
 2       Q.    Right.  And we know that even if we don't know
 3  how much the pizza cost, correct?
 4       A.    Correct.
 5       Q.    And so we can perform some -- a mathematical
 6  calculation, as you just did, to determine how -- what
 7  the difference is between the relative amount of pizza
 8  that we each ate, even if we don't know the price of the
 9  pizza; is that right?
10       A.    We already know the price of the pizza because
11  there's 10 slices and you said it's a dollar a slice.
12       Q.    No, ma'am, I didn't say it was a dollar a
13  slice.
14       A.    Oh, I'm sorry.  So could you repeat the
15  question again?
16       Q.    Sure.  We know that the difference between how
17  much pizza you ate and how much pizza I ate is a hundred
18  percent even if we don't know how much the pizza cost?
19       A.    No, I -- I can't agree with that.  You have to
20  divvy up the pieces you didn't eat, and you have to
21  assign value to that, as well.
22       Q.    Well, isn't two a hundred percent more than
23  one?
24       A.    It is, but you're just looking at those pieces
25  of pizza.  When the bill actually comes, you're going to
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 1  say --
 2                  THE COURT:  Ms. Stuckwisch, he didn't ask
 3  you about what to do when the bill comes.  He asked you
 4  wasn't two a hundred percent more than one.
 5                  THE WITNESS:  I -- I --
 6                  THE COURT:  And you answered that.
 7                  THE WITNESS:  -- I apologize, Your Honor.
 8                  THE COURT:  Keep your answers to the
 9  questions asked, please.
10                  THE WITNESS:  Yes, Your Honor.  I'm very
11  sorry.
12                  THE COURT:  Go ahead, Counsel.
13                  MR. DAVIS:  Thank you, Your Honor.
14      Q.   (By Mr. Davis)  And we know that two is a
15  hundred percent more than one without knowing how much
16  the pizza costs when the bill comes, correct?
17      A.   That is correct.
18      Q.   Thank you.
19                  MR. DAVIS:  Pass the witness, Your Honor.
20                  THE COURT:  All right.  Redirect, Mr.
21  Kean?
22                  MR. KEAN:  Yes, Your Honor.
23                  THE COURT:  Counsel, approach the bench,
24  please.
25                  (Bench conference.)
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 1                    THE COURT:  Any idea how long your

 2  redirect is going to be?

 3                    MR. KEAN:  Five minutes, 10 minutes.

 4                    THE COURT:  The jury needs a recess.  But

 5  hopefully we can wrap her up and then take a recess.

 6                    MR. KEAN:  Thank you.

 7                    (Bench conference concluded.)

 8                    THE COURT:  All right.  We'll proceed

 9  with redirect by the Defendant.

10                    Proceed, Counsel.

11                    MR. KEAN:  Thank you, Your Honor.

12                    REDIRECT EXAMINATION

13  BY MR. KEAN:

14      Q.   Ms. Stuckwisch, can a license be a reliable

15  starting point when there's no rate and no base?

16      A.   No.

17      Q.   Why not?

18      A.   Because you don't have a -- you don't have a

19  starting point.  And you need a starting point in order

20  to have it be comparable.  Otherwise you're just

21  speculating.

22      Q.   In Mr. Davis's pizza discussion that he was

23  just asking you about, is it your understanding that

24  that related to the market share analysis in Mr.

25  Bergman's opinion?
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 1        A.    Yes, that's my understanding.

 2        Q.    Why is Mr. Bergman's market share analysis

 3  flawed?

 4        A.    It is not related to the accused products.

 5        Q.    What is it related to for Sandvine?

 6        A.    It's total company revenue for Sandvine.

 7        Q.    And what is it related to for Cisco?

 8        A.    The SCE products.  So you've got a watermelon

 9  to apple comparison.

10        Q.    And what do you mean by that?

11        A.    I mean, you've got all of Sandvine's company

12  revenue, and that's the watermelon.  So you've got

13  everything for Sandvine, and you only have a small

14  portion of Cisco's revenue, which is the apple in my

15  example.

16        Q.    Ms. Stuckwisch, Mr. Davis asked you about how

17  many exhibits you presented in your testimony today.

18  How many exhibits did you consider in preparing for your

19  testimony today?

20        A.    Oh, hundreds, I -- I assume.  I -- a lot.

21        Q.    Thank you.

22              How many Georgia-Pacific factors are there?

23        A.    There are 15.

24        Q.    Are those Georgia-Pacific qualitative?

25        A.    Qualitative, yes.
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 1        Q.    What does that mean?

 2        A.    It means that it is a qualitative analysis,

 3   and there are not specific quantitate -- I apologize to

 4   use these terms, but it's -- it's not quantitative.  So

 5   it's -- at the end, it's not going to give you a -- an

 6   exact formula to come up with the end result.

 7            So if -- you know, .75, does it mean it's

 8   exactly .75?  It may be a little bit more, it may be a

 9   little bit less.  I mean, that is the way the

10   Georgia-Pacific factors work.  They're qualitative.  You

11   go through the rigorous analysis, and you get your

12   result.

13        Q.    Is it true in a qualitative analysis, you

14   don't have a particular number that's associated with

15   each one of those factors?

16        A.    That is correct.

17        Q.    Ms. Stuckwisch, Mr. Davis asked you about PTX

18   Exhibit 344.  Do you recall the testimony yesterday that

19   said associate -- associating related flows, that

20   functionality that Mr. Davis emphasized, that was not in

21   the PTS products, do you recall that testimony?

22        A.    Yes, I do.

23        Q.    Ms. Stuckwisch, you were asked about projected

24   revenue through 2022, and I believe you said you can't

25   answer that question.  Do you recall that?
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 1        A.    Yes, I do.

 2        Q.    Why could you not answer that question?

 3        A.    Because it's speculative to go beyond today.

 4   It would all be speculative.

 5        Q.    Ms. Stuckwisch, was your .75 percent royalty

 6   rate a conservative conclusion?

 7        A.    Yes, I think so.

 8        Q.    Why is that so?

 9        A.    Because I think that there are factors when

10   you take it into account that you could actually adjust

11   the rate even lower.  And, again, I mean, even looking

12   at the MeterFlow licenses, those are significantly less

13   than the .75 that I came up with.

14        Q.    Was the purpose of your overall analysis to

15   respond to Mr. Bergman?

16        A.    Yes.

17        Q.    And that Cisco analysis that Mr. Davis

18   displayed on the screen, what was the purpose of that

19   analysis?

20        A.    That was to show the -- to show some of the

21   speculation and unreliable assumptions that are in Mr.

22   Bergman's analysis, and to show that when you make any

23   kind of adjustment, how significant the number can

24   change at the end.

25        Q.    Is it true that that was just an illustration?
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 1        A.    Yes.

 2        Q.    Ms. Stuckwisch, Mr. Davis asked you about Mr.

 3  Brunell's insistence on a 2.5 percent royalty rate, do

 4  you recall that?

 5        A.    Yes, I do.

 6        Q.    Ms. Stuckwisch, if I went to a car dealer, and

 7  I was going to buy a car, and the car dealer insisted

 8  that the price was $20,000 dollars, does that mean that

 9  I'm only going to pay $20,000 thousand?

10        A.    No, sir.

11        Q.    Thank you.

12              MR. KEAN:  Your Honor, I pass the

13  witness.

14              THE COURT:  All right.  Additional cross?

15              MR. DAVIS:  Yes, Your Honor.

16              THE COURT:  Proceed.

17                    RECROSS-EXAMINATION

18  BY MR. DAVIS:

19        Q.    You mentioned a reliable starting point for a

20  reasonable royalty analysis on your redirect, Ms.

21  Stuckwisch, do you remember that?

22        A.    Yes.

23        Q.    In the Cisco agreement, we know the amount of

24  that agreement, correct?

25        A.    We know the settlement amount, that's correct.
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 1        Q.    And we also know from Mr. Bergman's analysis
 2  what the relative market shares were between Cisco and
 3  Sandvine, correct?
 4        A.    I disagree.
 5        Q.    We don't know what the difference in their
 6  market shares are?
 7        A.    It's a -- I -- I can't answer that.
 8        Q.    Okay.  Now, you criticized Mr. Bergman's
 9  analysis because he started with the whole revenue for
10  the Sandvine accused products, the $114 million, do you
11  remember that?
12        A.    No, I -- I don't recall.
13        Q.    Well, just on redirect here, you said Mr.
14  Bergman started with -- his -- his analysis accounted
15  for all of the revenue for the accused products, do you
16  remember that?
17        A.    I -- I apologize.  Can you put some context on
18  that?  I'm not sure what you're referring to.  On the
19  114 million?
20        Q.    Yes, I -- I heard you on re -- redirect say
21  that you thought that Mr. Bergman was accounting for too
22  much of Sandvine's revenue in his -- in his analysis?
23        A.    Again, I -- what I recall was -- had to do
24  with the speculative nature of going out to 2022.
25        Q.    Okay.  Well, when Mr. Bergman took the $114
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 1  million, do you remember when he walked through that

 2  analysis and gave credit back to Sandvine for all of the

 3  things that didn't have anything to do with the patented

 4  technology?

 5       A.   Sir, I -- are you sure you mean $114 million?

 6       Q.   I'm sorry -- yes, $114 million, yes.  He

 7  started with $114 million, and he credited back to

 8  Sandvine under his income approach for the cost of the

 9  goods, the cost of the hardware, the cost of all the

10  things that didn't have anything to do with the patented

11  technology, do you remember that?

12       A.   So on the income approach?

13       Q.   Uh-huh.

14       A.   Okay.  So, sorry, on the income approach, he

15  started with 114, okay.  So what's the -- what's the

16  question here?

17       Q.   Do you remember when he accounted for all of

18  the value in that $114 million that doesn't have

19  anything to do with the patented technology?

20       A.   I disagree that he didn't account for all --

21  everything.

22       Q.   Okay.  But he accounted for the cost of the

23  hardware, correct?

24       A.   He accounted for cost of goods sold.

25       Q.   He accounted for the marketing and sales
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 1 | expenses?

 2 | A.   SGA.

 3 | Q.   Yeah, he walked through all the things that he

 4 | accounted for, correct?

 5 | A.   He walked through what he accounted for, that

 6 | is correct, he did not account for everything.

 7 | Q.   Okay.

 8 | MR. DAVIS: And, Ms. Vogtman, could I

 9 | have the last slide in the deck, please?

10 | Q.   (By Mr. Davis)   Now, you showed this slide to

11 | the jury, and you showed that the Exar-Hi/Fn agreement

12 | was $1.5 million, you showed that the Exar-PI agreement

13 | was $875 million, and then you showed that your royalty

14 | rate was only $875,000, do you remember that?

15 | A.   So to clarify, this is not what I showed.

16 | Q.   I'm sorry.

17 | MR. DAVIS: Could I have the previous

18 | slide.

19 | A.   This is not my exhibit.

20 | Q.   (By Mr. Davis)   Thank you.

21 | This is your exhibit, right?

22 | A.   That is correct.

23 | Q.   Thank you.

24 | And you -- and you showed a downward trend of

25 | value for these patents, correct?

```
 1        A.    That is correct.

 2        Q.    Okay.  But what your analysis does not -- what

 3  this slide does not show is the Cisco agreement; is that

 4  right?

 5        A.    That is correct.

 6        Q.    And it doesn't show Dr. Bergman's opinion that

 7  the value in this -- that the reasonable royalty amount

 8  of damages in this case is $13.8 million, correct?

 9        A.    That's correct.

10        Q.    Okay.  And that's shown on this next slide,

11  right?

12        A.    Yes, you've got the Cisco license, and looks

13  like you've got Mr. Bergman's opinion on there, as well.

14        Q.    Okay.  Thank you.

15                   MR. DAVIS:  Pass the witness, Your Honor.

16                   THE COURT:  Any further redirect?

17                   MR. KEAN:  One final question, Your

18  Honor.

19                   THE COURT:  All right.

20                   REDIRECT EXAMINATION

21  BY MR. KEAN:

22        Q.    Ms. Stuckwisch, if the jury concludes that

23  there's no infringement in this case, what is the right

24  answer as far as a damages number?

25        A.    Zero.
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1   Q.   Thank you.

2   THE COURT: Mr. Davis, anything further?

3   MR. DAVIS: No, Your Honor.

4   THE COURT: You may step down, Ms.

5 Stuckwisch.

6   Ladies and gentlemen of the jury, we're

7 going to take a short recess at this time. You may

8 simply close your notebooks and leave them in your

9 chairs. Follow all my instructions, including not to

10 discuss the case. And we'll be back to continue in a

11 few minutes.

12   You're excused for recess at this time.

13   COURT SECURITY OFFICER: All rise for the

14 jury.

15   (Jury out.)

16   THE COURT: Mr. Buresh, I assume when the

17 jury returns and I ask Defendants to call their next

18 witness, you'll tell me that you're resting your

19 case-in-chief?

20   MR. BURESH: You are correct, Your Honor.

21   THE COURT: All right. And,

22 Mr. Skiermont, you have one or two rebuttal witnesses to

23 call?

24   MR. SKIERMONT: We have -- we will call

25 Dr. Almeroth for sure. I think we need to confer since

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 1  Ms. Stuckwisch just got off the stand whether we're

 2  going to do a rebuttal.

 3                  THE COURT:  Okay.  Definitely one, not

 4  more than two.

 5                  MR. SKIERMONT:  Correct, Your Honor.

 6                  THE COURT:  All right.  Let's -- let's

 7  take a short break.  The Court stands in recess.

 8                  (Recess.)

 9                  (Jury out.)

10                  COURT SECURITY OFFICER:  All rise.

11                  THE COURT:  Be seated, please.

12                  All right.  Let's bring in the jury,

13  please.

14                  COURT SECURITY OFFICER:  All rise for the

15  jury.

16                  (Jury in.)

17                  THE COURT:  Please be seated, ladies and

18  gentlemen.

19                  All right.  Defendants, call your next

20  witness.

21                  MR. GILLAM:   Your Honor, at this time,

22  the Defendant rests.

23                  THE COURT:  All right.  The Defendants

24  having rested their case-in-chief, does the Plaintiff

25  have a rebuttal case to present?
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 1                        MR. DAVIS:    We do, Your Honor.

 2                        THE COURT:   Call your first rebuttal

 3   witness.

 4                        MR. DAVIS:   Plaintiffs call Dr. Kevin

 5   Almeroth to the stand.

 6                        THE COURT:   All right.   If you'll come

 7   forward, Dr. Almeroth.   You remain under oath, sir.

 8                        Please have a seat on the witness stand.

 9                        THE WITNESS:   Yes, Your Honor.

10                        THE COURT:   All right.   Ms. Abdullah, you

11   may proceed with your direct examination.

12                        MS. ABDULLAH:   Thank you, Your Honor.

13           KEVIN ALMEROTH, PH.D., PLAINTIFF'S WITNESS,

14                          PREVIOUSLY SWORN

15                         DIRECT EXAMINATION

16   BY MS. ABDULLAH:

17       Q.    Welcome back, Dr. Almeroth.

18       A.    Thank you.

19       Q.    Now, have you been in the courtroom listening

20   to testimony throughout the trial?

21       A.    Yes, ma'am, I have.

22       Q.    And were you here yesterday for Dr. Nettles's

23   testimony?

24       A.    I was.

25       Q.    And did you hear his testimony about
```

1 connection flows and conversational flows?

2   A.   Yes, I did.

3   Q.   Do you agree with everything he said?

4   A.   No, I do not.

5   Q.   Now, was there anything that you did agree

6 with him on?

7   A.   In fact, there was. There was some things

8 that we did agree on.

9   Q.   And can you remember some examples of what you

10 did agree with Dr. Nettles on?

11   A.   Certainly. I heard Dr. Nettles in his

12 testimony say that the flow-entry database, the thing

13 that stores the flows, could be composed of multiple

14 connection flows and that that was within the scope of

15 the claims.

16   Q.   And can you explain what you mean by that?

17   A.   Certainly. If you can pull up the Defendants'

18 opening demonstratives, No. 15.

19   In this demonstrative, Sandvine's lawyer said

20 that what's shown here on the left is what the patent

21 covers. And then he said what's shown here on the right

22 is what Sandvine does. And I believe Dr. Nettles

23 disagreed with that and said that this flow-entry

24 database within scope of the claims could be composed of

25 multiple independent flow-entries.

 1   Q.   And so does that mean that Dr. Nettles agreed

 2 with you or with Sandvine's counsel?

 3   A.   That he agreed with me.

 4   MS. ABDULLAH: Can we pull up the

 5 transcript from yesterday afternoon, Page 168, Lines 16

 6 through 22?

 7   Q.   (By Ms. Abdullah) And do you recall, Dr.

 8 Almeroth, when Mr. Skiermont asked Dr. Nettles,

 9 question: The claim, in fact, requires the flow-entry

10 database store the conversational flows in general.

11 Whether it does that by maintaining separate entries of

12 connection flows or just one entry, either are within

13 the scope of the claim, correct?

14   Answer --

15   A.   I --

16   Q.   Oh, I'm sorry.

17   A.   No.

18   Q.   ANSWER: I believe I testified to that, as

19 well.

20   Do you remember that testimony, Dr. Almeroth?

21   A.   Yes, I do.

22   Q.   And is that the testimony you were referencing

23 when you said that Dr. Nettles agrees with you with

24 respect to that Slide 15?

25   A.   That's the testimony, yes, ma'am.

1   Q.   And did Dr. Nettles further confirm yesterday

2   that he disagrees with the way that Sandvine's counsel

3   described the conversational flow requirement in that

4   slide?

5   A.   Yes, he did.   There was additional testimony.

6   MS. ABDULLAH: If we can pull up Page

7   169, Lines 20 through 24.

8   Q.   (By Ms. Abdullah) And do you remember, Dr.

9   Almeroth, when Mr. Skiermont asked Dr. Nettles: Dr.

10 Nettles, is it your opinion in this case that the

11 conversational flow must be one entry in a flow table,

12 as depicted in Bob's Facebook conversation on

13 Plaintiff's Opening Slide 15?

14   And he answered: Not in general, no, sir.

15   Do you recall that?

16   A.   Yes, I do.

17   Q.   And is that the additional testimony you were

18 referencing when you noted that Dr. Nettles agrees with

19 you?

20   A.   Yes.

21   MS. ABDULLAH: If we can go back to

22 Defendants' Opening Slide 15.

23   Q.   (By Ms. Abdullah) Now, Dr. Almeroth -- once

24 we have it up -- can you explain to the jury what that

25 testimony that we just looked at means with respect to

 1 | Sandvine's infringement?

 2 | A.   It means that Dr. Nettles and I agree and that

 3 | Sandvine's lawyer was wrong, that this isn't what the

 4 | patent claims are limited to, that it includes

 5 | connection flows that are related to each other as one

 6 | of the possible embodiments, one of the ways that you

 7 | can infringe the claim.

 8 | And for that reason, I think that the claims

 9 | are infringed.

10 | Q.   And can you explain how that example in the

11 | right with multiple flow-entries falls within the claim

12 | scope of the conversational flow requirement?

13 | A.   Yes, I can.

14 | So the -- the place I would start is with the

15 | Court's claim construction, the construction that --

16 | that both experts were expected to follow in this case.

17 | THE WITNESS: And so, Ms. Vogtman, if you

18 | could pull up Dr. Nettles' Slides No. 13.

19 | A.   This is the same language that I used in my

20 | open -- in my testimony on Monday. It's the same

21 | definition that the Court provided and that Dr. Nettles

22 | used. It's the Court's claim construction for

23 | conversational flow.

24 | And what I wanted to do was to walk through

25 | that language and explain it.

1   It says: The sequence of packets that are

2 exchanged in any direction as a result of an activity --

3 for instance, the running of an application on a server

4 as requested by a client.

5   So the first thing to look for is a sequence

6 of packets that are exchanged in a direction, and that

7 it's the result of an activity, including the running of

8 an application.

9   There's a second portion here that says:

10 Where some conversational flows involve more than one

11 connection. So that's something else to look for as a

12 requirement of what a conversational flow is.

13   And then it says: Some of the connections

14 involve one or more exchange of packets between a client

15 and server.

16   So some can involve one. Some can involve one

17 or more. But the key piece is that you have activity as

18 a result of a user and that you can have more than one

19 connection flow involved in a conversation. That's what

20 makes a conversational flow.

21   Q.   (By Ms. Abdullah) And can you take that

22 construction, that definition, and apply it to how Dr.

23 Nettles describes Sandvine's technology?

24   A.   Yes.

25   THE WITNESS: Ms. Vogtman, if you could

 1 | bring up Dr. Nettles' Demonstrative No. 24.

 2 | A.   This is the one slide that Dr. Nettles

 3 | presented on the way that Sandvine's implementation

 4 | works.   And what he described up here was that you have

 5 | Bob running Facebook, so it's an application, it's user

 6 | activity.   You see here three connections, and so you

 7 | have the exchange of packets in either direction -- in

 8 | this case both directions -- you have multiple exchanges

 9 | of packets in each direction, and you have multiple

10 | connections.

11 | So if you go back and you compare that to the

12 | requirements of the Court's construction for a

13 | conversational flow, you have user activity, you have

14 | something that results in multiple connections possibly,

15 | and then multiple exchanges of packets.

16 | And then what Dr. Nettles described was how

17 | each of these three connections were represented inside

18 | Sandvine's flow-entry table.   And these -- each one

19 | represented a flow record.

20 | And the point then was that there's lots of

21 | information stored for each of the flow-entries inside

22 | Sandvine's products.   So the fact that they have

23 | multiple connections, those connections are related to

24 | each other based on all of the information, and it's a

25 | result of a user activity mean that these connections

1 together form a conversational flow.

2   Now, one of the things that's not shown on

3 this slide is that part of what Sandvine does is to fill

4 in what the application is. There's many fields here in

5 the source code for what an entry can contain. Some of

6 those include information that can be related to each

7 other to form a conversational flow among the

8 connections.

9   Q.   (By Ms. Abdullah) When you testified earlier

10 this week, did you testify that each of these entries

11 was a connection flow?

12   A.   I did.

13   Q.   And is that consistent with your testimony

14 here today?

15   A.   It is. Each of these is a connection flow and

16 they're related to each other. And, in fact, that in

17 this example, the example that Dr. Nettles used to

18 describe Sandvine's implementation, you have three

19 connections that are relayed to a -- each other, and

20 those three connections make a conversational flow.

21   So the flows can be both, they can both be

22 connections individually, and then a combination of

23 those can form a conversational flow.

24   Q.   And how does that relate to Mr. Buresh's

25 example with the -- the rice and the mesh bag?

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 1        A.    It relates because you can have both the
 2  individual grains of rice, they can be the connections,
 3  but you can also have the mesh that ties those
 4  individual pieces of grains together and allows you to
 5  relate them to each other in the same way that
 6  Sandvine's PTS products do.
 7        Q.    And in this example, would it be that user
 8  activity that's -- that's allowing them to relate
 9  together?
10        A.    It is.   The user activity in the fields that
11  are in the flow record.
12        Q.    Now, talking about Sandvine's products more
13  specifically, how does Sandvine relate the -- the
14  connection flows together?
15        A.    Once you have the flow-entries, the way that
16  Sandvine's products work to relate those are through the
17  concepts of priming and tracking and analyzing.   So
18  there's source code that relates to those three
19  functions that are used to fill in the rest of the
20  fields in a flow-entry.   And with the rest of the
21  information, you can relate those flow-entries together
22  as a conversational flow.
23        Q.    Now, you mentioned source code.   Is there a
24  particular file you have in mind?
25        A.    Yes, the FlowRecord.h.
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 1                    MS. ABDULLAH:   If we could pull up --

 2  excuse me.   If we could pull up DTX-255, Flow Record.h,

 3  please?

 4        Q.   (By Ms. Abdullah)   And can you tell the jury

 5  what we're looking at here?

 6        A.   What you're looking at is the description of

 7  all the entries in the flow record in the accused

 8  products.   This is a source code file that includes

 9  multiple pages.   It starts at the top saying that it's

10  the ptsFlowRecord.h.

11                    THE WITNESS:   And, Ms. Vogtman, if you

12  could sort of scan through these pages.

13        A.   These pages all describe fields and entries

14  inside of the flow record that can be used to relate the

15  different flow-entries to each other.

16        Q.   (By Ms. Abdullah)   And so some of these are

17  the fields that weren't shown on that Sandvine

18  demonstrative slide?

19        A.   That's correct.   From Dr. Nettles.   He only

20  showed a -- a handful of slides.   There's -- there's

21  dozens and dozens of fields across hundreds of lines of

22  source code that define additional fields.

23        Q.   What is the significance of those fields?

24        A.   The significance of those fields is that they

25  record information about what the user activity was,
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 1  that there's fields that relate that it was Facebook

 2  activity, that it was the Facebook application.  And

 3  it's information in those fields and in those records

 4  that can be related together to form a conversational

 5  flow.

 6      Q.    And so is that the information that Sandvine

 7  products use to identify a conversational flow?

 8      A.    It is.

 9      Q.    Now, do some of these fields have sub-fields?

10      A.    Some have sub-fields.  There's additional

11  fields not specifically described in this source code,

12  but tied into this source code based on some of these

13  other files.

14      Q.    And are there also extensions?

15      A.    Yes, ma'am.

16      Q.    And what do those -- what is the function of

17  those extensions?

18      A.    The extensions, like the other fields, allow

19  the Sandvine PTS products to relate those fields to each

20  other, those separate connections, to say that they're

21  part of the same conversation.

22      Q.    Now, did Mr. Bowman yesterday also talk about

23  the same priming functionality that you've been

24  discussing in your testimony today?

25      A.    Yes, he did.
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 1   MS. ABDULLAH: Can we pull up Page 4,

 2 Line 16 through 22 from yesterday afternoon?

 3   Q.   (By Ms. Abdullah)   And do you remember, Dr.

 4 Almeroth, when Mr. Buresh asked Mr. Bowman: At a high

 5 level, Mr. Bowman, what is priming?

 6   And he answered: So priming is an aid or a

 7 hint that we have in our signature detection or

 8 application ID detection that we talked about earlier.

 9 Sometimes there are some possible future connection

10 flows that don't have a good signature on it, and the

11 easiest way to identify them is to create a hint from an

12 earlier connection flow.

13   Is this the testimony you were referring to a

14 few minutes ago?

15   A.   Yes, ma'am, it is.

16   Q.   And can you explain to the jury, please, what

17 this tells you about Sandvine's infringement?

18   A.   What it tells me is that they have mechanisms

19 in their products to create flow-entries.   And I believe

20 Mr. Bowman and Dr. Nettles testified to that.

21   There is a separate process called priming and

22 tracking an analysis that attempts to fill in the

23 additional fields of a flow-entry; what the protocol is,

24 what the application is.

25   One way of doing that is priming, by saying

 1 there might be a future flow that has some of the same

 2 characteristics and can be related to a flow that

 3 already exists. And then when that flow does come in,

 4 it can be related to the other flow through tracking and

 5 analysis.

 6   So these different functions work together in

 7 the Sandvine accused products to fill out the rest of

 8 the fields and do more than just track con -- or

 9 connection flows, to be able to associate and relate

10 those together into a conversation flow.

11   Q.   Did you tell us about these primers, trackers,

12 and analyzers during your testimony on Monday?

13   A.   Yes, ma'am, I did.

14   Q.   Did you show us some documents and source code

15 about those?

16   A.   Yes, I did.

17   Q.   Now, do you remember yesterday there was some

18 testimony from folks about a particular Sandvine

19 document that some people were saying was incorrect?

20   A.   Yes, I remember that.

21   Q.   Now, did you rely on the portions of that

22 document that -- that folks were saying was wrong?

23   A.   No, I didn't.

24   Q.   What did you use that document for?

25   A.   I used that document to get a general

1 understanding of what priming is at a high level, and

2 then also for tracking and analysis. But I also used

3 other documents and even the source code to confirm how

4 the accused products work.

5   Q.   And did those other documents and source code

6 confirm your understanding?

7   A.   Yes, they did.

8   MS. ABDULLAH: If we could go to the

9 slide from Dr. Almeroth's direct examination on Monday,

10 Slide 53.

11   Q.   (By Ms. Abdullah) Can you remind us what you

12 showed us on Monday with respect to this slide?

13   A.   Yes. This is some of the documents that I

14 relied on and then confirmed in the source code. And in

15 this particular document, which is PTX-327, I

16 highlighted particular language that I thought was

17 relevant to the description of how priming works in

18 conjunction with the tracking and the analysis.

19   And it says that the priming infrastructure

20 improves protocol recognition by correlating a flow

21 without a clear signature to a recognized flow using

22 certain flow properties and classification conditions.

23   Q.   Did Mr. Bowman testify that this document was

24 incorrect?

25   A.   No, not this one.

 1   Q.   And did you also rely on source code in

 2 connection with your opinion?

 3   A.   Yes, I did, including some of the ones we

 4 talked about earlier.

 5   MS. ABDULLAH: We can take that off the

 6 screen, please.

 7   Q.   (By Ms. Abdullah)   Now, were you also in the

 8 courtroom yesterday when Dr. Nettles criticized you for

 9 not citing source code in support of your conversational

10 flow limitation?

11   A.   Yes, I was here for that.

12   Q.   Did you, in fact, consider source code in

13 forming your opinions on conversational flow?

14   A.   Absolutely.

15   Q.   Can you describe what you did?

16   A.   Certainly. I looked at documents to see what

17 the general functionality was. That provided insight to

18 me to help me guide where to look in the source code,

19 what some of the file names might be, what some of the

20 function names might be. And based on that, I found the

21 source code files that I thought were relevant to my

22 analysis and that indicated the functionality that I was

23 relying on to determine that each of the limitations

24 were met.

25   Q.   And approximately how long did you spend

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 1  reviewing Sandvine source code?

 2       A.    About 30 hours.  I flew to Kansas City to look

 3  at the source code in their offices, and then I also had

 4  printouts of source code that were -- I mean, inches

 5  high that I spent time reviewing.

 6       Q.    And based on that source code, what did you

 7  conclude?

 8       A.    I concluded that the functionality that I was

 9  seeing in the documents and that I was relying on for

10  infringement was, in fact, implemented and operating in

11  the accused products.

12       Q.    During Dr. Nettles' testimony, did you see him

13  present any source code on any of his slides when he was

14  telling the jury about his opinions?

15       A.    No, not on his slides.  He had one slide.

16  I've shown it already.  That was it on how Sandvine

17  works.

18       Q.    Did he talk about source code at all?

19       A.    He did.

20       Q.    In what context did he talk about it?

21       A.    He talked about it in the context of pointing

22  to the slides that I had used for evidence when I was

23  presenting on Monday.

24       Q.    Other than the slides that you had prepared,

25  did he show the jury any Sandvine documents on any of
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 1 his slides when he was offering his opinions?

 2   A.   No, nothing.

 3   Q.   And other than looking at the slides that you

 4 had prepared, did he -- did Dr. Nettles show the jury

 5 any testimony from Sandvine witnesses on any of his

 6 slides?

 7   A.   No, he did not.

 8   Q.   Excuse me.

 9   What did he show the jury?

10   A.   He did show the animation -- or it wasn't an

11 animation -- the still image on his slide. I believe it

12 was Slide 24 from his direct that showed just the -- the

13 summary of -- of how Sandvine worked.

14   Q.   And was that something he had created?

15   A.   Yes, it was.

16   Q.   And when you were offering your opinions, what

17 kind of information was on your slides?

18   A.   Exhibit numbers, pages, source code files,

19 line numbers, documents, testimony. I -- I spent a good

20 deal of time in -- you know, dozens of slides going

21 through evidence.

22   Q.   You mentioned that Dr. Nettles did look at

23 some of the slides that you had presented during his

24 testimony. What did he say about them?

25   A.   His principal opinion seemed to be that in

 1 those slides, I was focused on information that showed

 2 that the accused products had connection flows.

 3   Q.   Is that accurate?

 4   A.   In part. I -- I used that evidence to

 5 demonstrate that there were connection flows. I think

 6 now that we've heard the testimony, that very clearly is

 7 the case. But I also used those files and those slides,

 8 including the ones I presented today, to show that those

 9 connection flows are related to each other in

10 conversation flows. I -- I showed the source code that

11 identified the fields and how they're related to each

12 other. I presented the documents that describe the

13 functionality. I -- I went into -- to significant

14 detail.

15   Q.   Now, when we're talking about con --

16 conversational flows and connection flows, is a flow one

17 or the other?

18   A.   No, no.

19   Q.   And can you explain that a little more?

20   A.   Sure. A connection flow is -- is the set of

21 information related to a connection, part of which is

22 the 5-Tuple that identifies that connection. But it

23 also includes all of the other information associated

24 with that connection.

25   So you can have a flow-entry that's a

1 connection, and then you can have multiple connections

2 taken together in the ways that I've described to form a

3 connection -- or, sorry, a conversation flow.

4   So it isn't the case that the one entry in the

5 table is a connection flow and only a connection flow.

6 It can be a connection flow and part of a conversation

7 flow.

8   Q.   And does the patents -- do the patents talk

9 about that concept?

10   A.   Yes, they do.

11   MS. ABDULLAH: If we could pull up PTX-9,

12 please, Column 2, starting at Line 42.   That paragraph.

13   Q.   (By Ms. Abdullah)   Now, this paragraph has

14 come up a few times during this trial, right?

15   A.   Yes, ma'am.

16   Q.   And what does this paragraph tell us about

17 connection flows and conversational flows?

18   A.   It -- it reenforces the opinion that I just

19 described.   It talks about what a connection flow is,

20 and then it talks about a conversation flow on the other

21 hand.   Clearly, a conversational flow is something

22 different than a connection flow by itself.

23   In some of this language here that I've high

24 -- that I've shown and highlighted reflects language

25 that's part of the Court's construction.   It, again, is

1 the user activity. It's a result of an activity running

2 an application on a server, something like Facebook. So

3 it's more than just a single connection flow. It's

4 multiple connection flows that can be related to each

5 other.

6   MS. ABDULLAH: If we could go to Column

7 3, Line 53, that paragraph.

8   Q.   (By Ms. Abdullah) And is this more

9 information in the patents that tells us about that

10 relationship?

11   A.   Yes.

12   Q.   Can you explain to the jury how it does?

13   A.   Certainly. The -- above this paragraph is a

14 description of a -- of a protocol called SAP. And the

15 way that SAP works is it has multiple connections that

16 are -- that are part of the same conversation. And it

17 walked through the example of where just recognizing the

18 connection flows by themselves and not relating them

19 is -- is what the prior art was describing.

20   Here, it then says: What distinguishes this

21 invention from prior art network monitors is that it has

22 the ability to recognize disjointed flows as belonging

23 to the same conversational flow.

24   So that same concept that you can have

25 connection flows and those connection flows, even though

1 they're disjointed and stored separately within the

2 database, can be related to each other and determined to

3 belong to the same conversational flow.

4   Q.   And so these disjointed flows here are

5 disjointed connection flows?

6   A.   Yes.

7   MS. ABDULLAH: If we could move on to

8 Column 4 in the -- in the patent, the summary -- the

9 section that begins with Summary and enlarge it, please.

10   Q.   (By Ms. Abdullah)   Dr. Almeroth, do you see

11 where in that very first sentence it refers to various

12 embodiments?

13   A.   Yes, ma'am.

14   Q.   What does an embodiment mean for -- for a

15 patent?

16   A.   An embodiment is a different way of invent --

17 of implementing a particular invention that can involve

18 different features, potentially.

19   Q.   And so in this list that follows, could you

20 read that third item for the jury, please?

21   A.   Sure.   Determining the connection and flow

22 progress between clients and servers according to the

23 individual packet -- packets exchanged over a network.

24   Q.   And does that mean that that's one of the

25 things that an embodiment of the invention could do?

1   A.   Yes.

2   MS. ABDULLAH: If we could also take a

3   look at the fifth one.

4   Q.   (By Ms. Abdullah)   And if you would read that

5   out loud for us, please.

6   A.   Maintain statistics relevant to the mix of

7   client and server applications using network resources.

8   Q.   And is that also how the patent describes the

9   invention?

10   A.   Yes, absolutely.

11   Q.   Do the patent claims talk about both

12 connection flows and conversational flows?

13   A.   They do.

14   MS. ABDULLAH: If we could take a look at

15 Claim 19 of -- of PTX-9 -- and, again, this is the '789

16 patent.

17   Q.   (By Ms. Abdullah)   Can you tell us where in

18 this claim connection flows and conversational flows are

19 discussed?

20   A.   Certainly. So conversational flow is

21 mentioned one time here, and then the rest of the time

22 when it talks about flow-entries -- and flow-entries

23 happens in a number of places, basically the flow-entry

24 database, flow-entries, so there's numerous times where

25 the patent talks about both flow-entries and

 1 conversational flows.

 2   Q.   And so those flow-entries would correspond

 3 with connection flows?

 4   A.   Yes, ma'am.

 5   Q.   And does Dr. Nettles agree with that

 6 interpretation?

 7   A.   He does.

 8   Q.   How do you know that?

 9   A.   Based on the testimony that I heard from him

10 yesterday.

11   MS. ABDULLAH: If we could pull up Page

12 165 from yesterday afternoon, and we can enlarge that

13 top part.

14   Q.   (By Ms. Abdullah) Do you recall, Dr.

15 Almeroth, when Dr. Nettles was asked: And according to

16 your opinion, Dr. Nettles, where the Court's

17 construction uses the phrase "where each entry describes

18 a flow," that does not -- that could be a connection

19 flow, correct?

20   And the answer: Yes, sir, when you look just

21 at the construction, it could be a connection flow.

22   Is that the testimony you were referencing?

23   A.   Yes, ma'am.

24   Q.   And do you recall that testimony?

25   A.   I do.

1   Q.   And so how does this mean that Dr. Nettles

2 agrees with you?

3   A.   He agrees with me that when the patent is

4 talking about flow-entries, that those are referring to

5 connection flows, not a single unified conversational

6 flow.

7   MS. ABDULLAH: We can take that off the

8 screen.

9   Q.   (By Ms. Abdullah)   Now, we've heard a number

10 of analogies in this case.   Do you have an analogy for

11 us, Dr. Almeroth, that will help us understand this

12 concept of connection flows and conversational flows?

13   A.   I do.

14   Q.   Would you give that to the jury, please?

15   A.   Sure.   Mr. Buresh used the analogy of a

16 wedding, and I was going to follow up on that and

17 suggest that the people at a wedding are the connection

18 flows.   They're the individual person, they're

19 represented by something that uniquely identifies like

20 their name or to be more specific a Social Security

21 number.

22   And so when you go to a wedding and -- and

23 people walk in the door, what the PTS products are

24 trying to do is identify that person as a flow.   So

25 those individual people can be flows.   They might have a

 1 name tag with a name to carry the analogy a little bit

 2 further. Where the PTS products have, like, 40 fields,

 3 your name tag could say your first name and your last

 4 name and your address, where you live, how old you are,

 5 lots of information. And -- and part of what the -- the

 6 aunt in the corner is doing is looking at people at the

 7 connections and trying to relate them to each other.

 8   And so you can have individual people or

 9 connection flows, but you can also have multiple

10 connection flows that are related to each other as a

11 conversation flow. And part of what the PTS products

12 are trying to do is to be able to identify what people

13 are related to each other based on the information that

14 it can determine from analyzing those packets.

15   Q.   So what would be some examples of how you

16 could figure out who's related to whom?

17   A.   Well, you could do it based on priming, okay.

18 I haven't seen that family in 20 years, but I know they

19 were married with two kids, so I'm expecting when they

20 come in they'll have two kids that are about a certain

21 age.

22   Now, when they walk in, you say, ah-ha,

23 there's a flow-entry. And you start to fill in

24 information about that flow-entry, some of what you

25 remembered from the priming entry.

 1   You're tracking and you're analyzing people,

 2 and you're trying to match them up. You can say, well,

 3 I know that there's four people named Smith, that

 4 there's two people in their 40s, and then there's two

 5 other people in their 20s, and I remember that they had

 6 kids. And so you can relate those four entries to each

 7 other.

 8   In some cases, the name tags might even say

 9 that I'm a daughter of so-and-so. So you get a

10 relationship between particular flows based on the

11 information on what you know, what's on their name tag,

12 what you can determine.

13   Q.   Using that analogy, what does Sandvine say you

14 have to do in order to infringe?

15   A.   So Sandvine's concept, what the lawyers said

16 in the opening was, you had to have a conversational

17 flow. And it was -- it was one entry where everything

18 was mashed together.

19   So in this analogy, I -- I suppose that all

20 the family members would have to basically stick

21 together, and that was the conversational flow where all

22 of the information about all of them were all added up

23 and combined together into a single entry, and I just

24 don't think that's what the patent says.

25   Q.   And who does Dr. Nettles agree with?

 1   A.   He agrees with me.   I've -- I've shown his

 2 testimony.

 3   Q.   Dr. Almeroth, in your prior testimony did you

 4 ever say that Sandvine uses priming to identify Netflix

 5 traffic?

 6   A.   No, I did not.

 7   Q.   What was the context in which you were talking

 8 about Netflix on Monday?

 9   A.   Well, the way I was using Netflix was really

10 to just describe the technology and the concepts,

11 packets and protocols and applications and requests,

12 just -- just to give some context for the -- for the

13 words that I was using and would be showing in the

14 evidence.

15   Q.   And do the Sandvine PTS products inspect

16 Netflix packets to further fill in some of those fields

17 in the flow record?

18   A.   Yes, they do.

19   Q.   Can you explain that, please?

20   A.   Sure.   The -- I -- I tend to think about

21 priming and tracking and analyzing together.   They're --

22 they're all different ways of -- of looking at the

23 information that comes in in a packet and trying to fill

24 out some of the fields in a flow record.

25   For different applications, I showed evidence

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 1  that said there were 500 protocols and applications, and

 2  they use different combinations of tracking and

 3  analyzing and priming.

 4            So some applications use some of those

 5  features and others don't.  But altogether, the Sandvine

 6  PTS products are using those features to try and relate

 7  those flows to each other.

 8       Q.   And does Sandvine attempt to classify all

 9  traffic using the methods you just described?

10       A.   Yes, they do.

11       Q.   Now, does this processing happen in the PTS

12  product?

13       A.   Yes, it does.

14       Q.   We heard Doctor -- excuse me, Mr. Bowman, talk

15  about network analytics and -- and those products.  How

16  do those relate to the PTS products?

17       A.   Those are additional products, but what's

18  important is that they use the information from the

19  flow-entries to --

20                 MR. BURESH:  Your Honor, may we approach?

21                 THE COURT:  Approach the bench.

22                 (Bench conference.)

23                 THE COURT:  All right.  Go ahead, Mr.

24  Buresh.

25                 MR. BURESH:  Your Honor, network
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 1  analytics are nowhere discussed in Dr. Almeroth's

 2  report, he has no predicate for this testimony.

 3                  MS. ABDULLAH:  Your Honor, he's

 4  responding to Mr. Bowman's testimony from yesterday

 5  regarding what the distinction between the PTS products

 6  and these products that has never been brought up

 7  before.

 8                  THE COURT:  I understand he's responding

 9  to what Mr. Bowman testified to, but are -- what's your

10  response to the assertion that whether or not it's in

11  response to Mr. Bowman or not, it's not addressed in his

12  expert report?

13                  MS. ABDULLAH:  Well, what -- what he --

14  the -- his opinion that he's about to give is that all

15  of the infringing functionality is in the PTS products,

16  not anywhere else.  And so that's simply the point he's

17  making that whether Mr. Bowman talks about network

18  analytics or not, he's not going to get into any

19  functionality of network analytics, it's simply that,

20  you know, it's just the PTS products are what feeds the

21  infringement into the -- the analytics.

22                  MR. BURESH:  Your Honor, I believe the

23  question was:  Describe network analytics and how they

24  operate.  And he began to answer that question, which is

25  what drew my objection.
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 1                    THE COURT:  All right.

 2                    MS. ABDULLAH:  I might be able to

 3  rephrase that to -- I -- I don't think that's what I

 4  asked, but if it is, I could rephrase.

 5                    THE COURT:  Well, to the extent it's

 6  asking for what Mr. Buresh is saying, then I think

 7  that -- that is a sustainable objection.  But to the

 8  extent he testifies to what's within the scope of his

 9  report, that's certainly not a problem.

10                    MS. ABDULLAH:  Okay.  I'll --

11                    THE COURT:  So --

12                    MS. ABDULLAH:  I'll ask another question.

13                    THE COURT:  So rephrase the question, and

14  if it's still objectionable, you can raise it at that

15  time.

16                    MR. BURESH:  Thank you, Your Honor.

17                    MS. ABDULLAH:  Thank you.

18                    (Bench conference concluded.)

19                    THE COURT:  All right.  Counsel, restate

20  your question.

21      Q.   (By Ms. Abdullah)  Is all of the functionality

22  that you found to infringe in Sandvine's products, is

23  that all contained in the PTS products?

24      A.   Yes, ma'am, it is.

25      Q.   Now, looking at the -- the claims of the
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1 patents that we've been talking about here that are

2 asserted, is Sandvine disputing all of the elements of

3 the claims?

4   A.   No, they're not.

5   Q.   And approximately how many elements per claim

6 are they disputing?

7   A.   Part of one or in at least one instance none

8 of the limitations.

9   Q.   And how did you determine that?

10   A.   Based on a demonstrative that Dr. Nettles

11 presented yesterday, Slide 22.

12   Q.   Okay.

13   MS. ABDULLAH: If we could pull up Dr.

14 Nettles's Slide 22.

15   Q.   (By Ms. Abdullah)   Is this the demonstrative

16 you were referencing a minute ago?

17   A.   Yes, ma'am.

18   Q.   And tell the jury, please, how this helped you

19 determine that Sandvine is only disputing a few

20 elements.

21   A.   That these were the elements that Dr. Nettles

22 focused on in his testimony, arguing that there wasn't a

23 flow-entry database for containing one or more

24 flow-entries for previously encountered conversational

25 flows as it's described at least in -- in the

1 limitations that are highlighted here and here.

2   Q.   Dr. Almeroth, I noticed you didn't indicate

3 that last element in the bottom right relating to the

4 '725 patent. Was that intentional?

5   A.   Yes, ma'am, it was.

6   Q.   Can you explain why it is that Sandvine is not

7 disputing that claim element, even though it contains

8 the word "conversational flow"?

9   A.   Certainly. The -- as I understand the -- the

10 basis for Sandvine's position that they don't infringe

11 is that there isn't a database with a consolidated

12 conversational flow entry, that a single conversational

13 flow-entry for a collection of flows is not stored in

14 the database.

15   But if you look at what this last limitation

16 of Claim 10 of the '725 patent says, it doesn't talk

17 about a database. It doesn't talk about storing a

18 conversational flow. All it talks about is saying that

19 the protocol specific operations include parsing and

20 extraction operations to extract portions of a packet to

21 form a function of those portions for identifying the

22 packet as belonging to a conversational flow.

23   So that the evidence and the -- the testimony

24 and the positions that Sandvine are taking are all

25 around this idea of the flow-entry database and what

 1 that's supposed to be. And that's simply not a

 2 requirement of Claim 10 of the '725 patent.

 3   Q.   Now, for the claims that do mention flow-entry

 4 database, does Dr. Nettles agree with the argument that

 5 Sandvine's lawyers have made?

 6   A.   No, he doesn't.

 7   Q.   And how do you know?

 8   A.   I know -- I -- I walked through that -- that

 9 evidence and that testimony. If you compare the slide

10 that Sandvine's lawyers presented in the opening for why

11 they were different, that difference was not something

12 that Dr. Nettles agreed with in his testimony yesterday.

13   Q.   And was there additional testimony on Dr.

14 Nettles's opinions regarding conversational flows in the

15 flow-entry database?

16   A.   Yes.

17   MS. ABDULLAH: Could we pull up Page 169

18 through 170, Lines -- we'll start with 25 through 5?

19 169:25, through 170:5.

20   Q.   (By Ms. Abdullah) And do you recall, Dr.

21 Almeroth, yesterday when Dr. Nettles was asked:

22 Conversational flows, Dr. Nettles, do not literally have

23 to be in the flow-entry. There just has to be some way

24 of associating the flow-entry with whatever you're

25 establishing the conversational flow to be. Do you

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 1  agree with that?

 2            And answer:  I think that's what I testified

 3  to, yes, sir.

 4            Do you recall that testimony?

 5       A.   Yes, ma'am.

 6       Q.   And is that what you were referencing a minute

 7  ago?

 8       A.   Yes, it is.

 9            MS. ABDULLAH:  We can take that off the

10  screen, please.

11       Q.   (By Ms. Abdullah)  Now, have you prepared any

12  demonstratives for today to show us which elements

13  Sandvine does not dispute in the independent claims that

14  have been asserted?

15       A.   Yes, I have.

16            MS. ABDULLAH:  If we could pull up the

17  demonstratives Dr. Almeroth prepared for today.

18       Q.   (By Ms. Abdullah)  And beginning with this

19  one, could you explain to the jury which elements

20  Sandvine is not disputing?

21       A.    So for the ones that they're not disputing,

22  they don't dispute this one, this one, this one, this

23  one, this one, that one, and that one.  So I've checked

24  off everything but Claim 19, Limitation (d).

25       Q.    And so to be clear, the parties agree that the
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1 PTS products meet all of those limitations that you just

2 checked off, right?

3   A.   Yes, ma'am.

4   Q.   Now, for the one you did not check off, based

5 on the evidence that you considered, were you able to

6 check that one off?

7   A.   Yes, I was.

8   Q.   Thank you.

9   MS. ABDULLAH: Now, if we can go to the

10 next demonstrative.

11   Q.   (By Ms. Abdullah)   And, once again, Dr.

12 Almeroth, for Claim 1 of the '751 patent, can you tell

13 us which of these elements the parties agree are present

14 in the PTS products?

15   A.   Sure.   The preamble, 1(a), 1(c), and 1(d), and

16 then only that last portion of the wherein clause --

17 sorry, that's -- because it has conversational flow,

18 that's one they haven't agreed to.

19   Q.   And based on your analysis, were you able to

20 check off those two elements?

21   A.   Yes, ma'am, I was.

22   Q.   And can you explain, please?

23   A.   Certainly.   Based on the testimony that I gave

24 on Monday and -- as well as today, and based on the

25 testimony from Dr. Nettles, I believe it's clear that

1 there is infringement of these additional two

2 limitations.

3   MS. ABDULLAH: Now, if we could move to

4 Claim 10 of the '725 patent.

5   Q.   (By Ms. Abdullah) And, once again, Dr.

6 Almeroth, could you please check off any elements that

7 the parties agree are in the PTS products?

8   A.   Sure. 10, and then I'm checking off this last

9 one because they don't dispute that there are just

10 portions that identify packets as belonging to a

11 conversational flow.

12   Q.   And does that relate to your testimony a few

13 minutes earlier about their arguments regarding

14 flow-entry database?

15   A.   Yes, ma'am.

16   Q.   And so Sandvine does not dispute that any of

17 these elements is present in the PTS products, correct?

18   A.   That's correct.

19   MS. ABDULLAH: We can take that off.

20   Q.   (By Ms. Abdullah) Dr. Almeroth, remind us

21 what those major benefits of the invention are that

22 you've seen described in the patents and in Sandvine's

23 documents.

24   A.   Traffic classification, quality of service,

25 and network security.

```
 1        Q.    And did you hear Dr. Nettles dispute those

 2 benefits at all?

 3        A.    No, he didn't.

 4        Q.    Thank you.

 5              MS. ABDULLAH:  Pass the witness.

 6              THE COURT:  Cross-examination?

 7              MR. BURESH:  Yes, Your Honor.

 8              THE COURT:  All right.  Let's proceed.

 9                   CROSS-EXAMINATION

10 BY MR. BURESH:

11        Q.    Dr. Almeroth, good morning again.

12        A.    Good morning.

13        Q.    You are here to testify today as a neutral

14 expert; is that correct?

15        A.    Yes, I believe so.

16        Q.    You believe you're supposed to be neutral?

17        A.    I believe I'm supposed to be neutral.

18        Q.    You believe you're supposed to be objective?

19        A.    Yes.

20        Q.    And you were supposed to stay neutral through

21 your entire analysis, correct?

22        A.    Yes.

23        Q.    And just present your analysis of the facts;

24 is that fair?

25        A.    Yes.
```

 1   Q.   And, yet, you would actually have this jury

 2 believe, according to your testimony, that Sandvine

 3 agrees with you that it infringes.   Is that what you're

 4 telling the jury?

 5   A.   Based on the arguments that were made, yes, I

 6 think that's true.

 7   Q.   So that's -- that's what you -- you want them

 8 to believe is that you're neutral and that Sandvine

 9 agrees with you that we're infringing.   That's your

10 testimony?

11   A.   They've presented no evidence on that claim.

12 I think that's true.

13   Q.   Now, during your direct examination -- I

14 suppose I should call you Dr. Nettles a couple times.

15 During your direct examination, Dr. Almeroth, you cited

16 to Don Bowman and his deposition testimony multiple

17 times, correct?

18   A.   I did.

19   Q.   You relied heavily on his deposition testimony

20 in your analysis, did you not?

21   A.   I -- I did rely on it.   I'm not sure I would

22 say it heavily.

23   Q.   And you were sitting in the courtroom when he

24 testified?

25   A.   Yes.

```
 1        Q.    So as a neutral expert, you heard him testify

 2   that nowhere in the PTS products are flows related

 3   together?   Did you hear that testimony?

 4        A.    I did hear that testimony.

 5        Q.    And as a neutral expert, you disagree with

 6   him?

 7        A.    No, I thought it was just a very carefully

 8   worded answer.

 9        Q.    Are your answers very carefully worded?

10        A.    Sometimes, but not always.

11        Q.    Now, Don Bowman went into -- into specifics

12   about how the PTS products operate during his testimony,

13   didn't he?

14        A.    Not really.

15        Q.    Well, you would agree, Dr. Almeroth, that

16   testimony that's been presented before this jury is, in

17   fact, evidence?

18        A.    Yes.

19        Q.    You agree with that?

20        A.    Yes, I do.

21        Q.    And you would even agree that when Dr. Nettles

22   testifies, that's evidence?

23        A.    I -- I suppose it is.   I think it might get

24   into a legal question, but I don't have a reason to say

25   no.
```

1   Q.   And Dr. Nettles walked through, as you heard

2 his testimony, he walked through every claim that was

3 asserted in this case, did he not?

4   A.   He did.

5   Q.   And he told the jury that it was his

6 conclusion that the PTS products did not infringe,

7 didn't he?

8   A.   He did say that.

9   Q.   And yet you're telling the jury that he agrees

10 with you that there's infringement?

11   A.   That's correct, because his basis wasn't

12 related to at least one of the claims.

13   Q.   Before this jury, Dr. Nettles's opinion was

14 clearly that there was no infringement; isn't that

15 correct?

16   A.   That's correct. That was what his ultimate

17 conclusion was.

18   MR. BURESH: If we could pull up Dr.

19 Nettles's Slide No. 24, please.

20   Q.   (By Mr. Buresh) Now, you testified a moment

21 ago about this slide, correct?

22   A.   Yes, sir.

23   Q.   And I tried to keep track, so I'll ask you to

24 correct me if I'm wrong, but I counted the phrase

25 "related to each other" eight times. And I might have

```
 1 missed a few, but that was your testimony over and over

 2 again that flows are related to each other; is that

 3 correct?

 4      A.    Yes, sir.

 5      Q.    That connection flows are related to each

 6 other?

 7      A.    That's correct, to -- to form a conversational

 8 flow.

 9      Q.    And you agree that when you say

10 "conversational flow," you're talking about a singular

11 thing, right?  And by "singular," I mean one, a

12 conversational flow is one thing?

13      A.    No, I don't think that's quite right.  I think

14 that's very vague, what you mean by "thing."

15      Q.    Okay.  Well, let me just ask it this way:  Do

16 you understand what the word "singular" means?

17      A.    I do.

18      Q.    If I say "conversational flow," would you

19 agree that that is a singular noun?

20      A.    It is.

21      Q.    What specifically in the PTS flow-entries that

22 you've discussed, and you said there's more fields than

23 what's depicted here, correct?

24      A.    Yes.

25      Q.    So in your opinion, what is it -- what field
```

1 relates flows together?

2   A.   Can -- can you clarify? Do you want a

3 specific variable name?

4   Q.   You said there's fields in the flow-entries

5 that relates -- that relate flows together. That was

6 your testimony, correct?

7   A.   Yes, it was.

8   Q.   Is there one field, or is it multiple fields?

9   A.   It can potentially be multiple fields. If you

10 look across the ptsFlowRecord.h and all of the different

11 fields that can be related to each other, in some

12 instances, for example, you can consider Bob as the

13 source address, as well as the protocol -- or sorry, the

14 application and other fields to determine that these

15 three fields are related to each other as part of the

16 same conversation. And that could be one example.

17   Q.   So you can relate them together in your

18 opinion simply by the fact that they share a common

19 characteristic?

20   A.   No, that's -- in this example, that's part of

21 it, but that's not the only way that it happens.

22   Q.   Now, Dr. Almeroth, I think I mostly tracked

23 your wedding example. But if I could ask a question

24 that maybe simplifies it for me so I understand it

25 better, okay?

```
 1            If we go to a wedding, and it's me and

 2 Mr. Skiermont here are -- are at the wedding together,

 3 just both guests at the wedding, we're both men,

 4 wouldn't you agree?

 5      A.   Yes.

 6      Q.   And you could relate us together by the fact

 7 that we're both men?

 8      A.   That's one way.

 9      Q.   Yes.

10      A.   Not -- sorry --

11      Q.   That is one way?

12      A.   That is one way.  There are other ways that

13 you can relate flows together, people at the wedding

14 together.

15      Q.   And despite the fact that we are both men,

16 myself and Mr. Skiermont, we are not one man; is that

17 correct?

18      A.   That's correct.

19            MR. BURESH:  If we could pull up the '789

20 patent, please.

21            And if we could go to Column 2.  I

22 suspect you know where that is.

23      Q.   (By Mr. Buresh)  Now, Dr. Almeroth, you agree

24 with me that there is a connection flow described here?

25      A.   Yes.
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```
 1        Q.    And there is also a conversational flow

 2  described here; is that correct?

 3        A.    Yes.

 4        Q.    And during your direct, you were asked the

 5  question about these two types of flows, and the

 6  question was:   Is a flow one or the other?

 7              And you answered:   No.

 8              Do you recall that testimony?

 9        A.    Yes.

10        Q.    Isn't it important to these inventions to

11  distinguish between a connection flow and a

12  conversational flow?

13        A.    Yes.

14        Q.    Now, Dr. Almeroth, while you were describing

15  this section of the conversational flow description out

16  of the '789 specification, your explanation used the

17  words "related to" as you described what a

18  conversational flow was, do you recall that?

19        A.    Yes.

20        Q.    But we don't see the words "related to"

21  anywhere in this description, do we, those words do not

22  appear?

23        A.    No, not those words, but that concept.

24        Q.    Those words do not appear?

25        A.    That's correct.   But the concept is there.
```

1   Q.   In your opinion?

2   THE COURT: All right. Gentlemen. Ask a

3 question.   Answer it.   Keep your answer to the question.

4 We're not going to have an argument back and forth.

5   Let's continue.

6   MR. BURESH: If we could turn next to the

7 summary, please, which is at Column 4, three-quarters of

8 the way down.

9   Q.   (By Mr. Buresh) You also testified about the

10 summary, correct?

11   A.   Yes, sir.

12   Q.   And I believe you went to the determine the

13 connection and flow progress between clients and

14 servers?

15   A.   Yes.

16   Q.   That was your -- the first point you

17 discussed?

18   A.   Yes, sir.

19   Q.   Now, you didn't keep going down in the summary

20 to the bottom one where it says: Report on occurrences

21 of specific sequences of packets used by particular

22 applications for client/server network conversational

23 flows.

24   You didn't mention that one, did you?

25   A.   No, not specifically.

 1   Q.   All right.   And then you actually went to the

 2 one right above it that said: Maintain statistics

 3 relevant to the mix of client/server application using

 4 network resources.

 5   You pointed out that one, right?

 6   A.   Yes, sir, I did.

 7   Q.   --   as the summary of the invention?

 8   MR. BURESH: If we could go next to

 9 Column 5.

10   Q.   (By Mr. Buresh) And the one you didn't

11 mention was maintaining statistics relevant to the

12 conversational flows. You didn't mention that one, did

13 you?

14   A.   No.

15   Q.   So wherever the summary described the

16 conversational flows, that was omitted from your

17 discussion of the summary, correct?

18   A.   That's correct, because it's only in some

19 embodiments.

20   Q.   And the term "conversational flow" appears in

21 every asserted claim of these patents that you've

22 asserted in this case, correct?

23   A.   Yes, it does.

24   Q.   So it's safe to assume the embodiment being

25 claimed is the one that involves conversational flows,

 1 right?

 2   A.   It does.   This is about statistics, though.

 3   MR. BURESH: If we could go to Claim 19

 4 of the '789 patent.   And bring up Limitation (d),

 5 please.

 6   Q.   (By Mr. Buresh)   Now, Dr. Almeroth, you

 7 recited in your role as a neutral expert some testimony

 8 from Dr. Nettles where he was describing the Court's

 9 construction of the database -- the flow-entry database.

10   A.   Yes.

11   Q.   And he agreed that the flow-entry database

12 under the Court's construction just said flow, it didn't

13 say conversational flow or connection flow.   You recall

14 that testimony?

15   A.   That's not quite what he said.

16   Q.   Well, let's look at the Claim Limitation (d).

17 That database, which the Court construed as just

18 requiring a flow, when we look at the claim, it includes

19 flow-entries for previously encountered conversational

20 flows; is that correct?

21   A.   I don't understand your question.

22   Q.   Does the database in Limitation (d) of the

23 '79 pat -- '789 patent require flow-entries for

24 previously encountered conversational flows?

25   A.   That's part of what's there.

```
 1        Q.    So, yes?

 2        A.    That's -- sorry, I can give you an

 3 explanation.  It's not quite that simple.

 4                   MR. BURESH:    If we could go next to Dr.

 5 Nettles' Slide 22, please.

 6        Q.    (By Mr. Buresh)  And I believe you agreed

 7 already that all of these claims require conversational

 8 flows, correct?

 9        A.    Yes.

10        Q.    And these are all of the asserted claims?

11        A.    They are.

12        Q.    That are reflected on this slide?

13        A.    They are.

14        Q.    And you agree that Dr. Nettles testified that

15 Sandvine's products do not identify packets as belonging

16 to conversational flows?

17        A.    No.  I don't think that's what he testified

18 to.

19        Q.    Oh, you think he agreed that the Sandvine

20 products do identify conversational flows?  That's your

21 testimony?

22        A.    No, that's not what I'm saying.

23        Q.    Did Dr. Nettles, since you were listening to

24 his testimony and now recounting it for us, say that

25 Claim 10 of the '725 patent was not infringed?
```

1   A.   He did reach that ultimate conclusion.

2   Q.   And I want to talk to you about Claim 5 since

3   we don't have any highlighting here from the '751

4   patent. You agree that if Claim 1 is not infringed,

5   Claim 5 can't be because it's a dependent claim, right?

6   A.   Yes, sir.

7   Q.   Now, Dr. Almeroth, if even one limitation of a

8   claim is not satisfied, according to the analysis that

9   you needed to perform in this case, there can be no

10   infringement, correct?

11   A.   That's correct.

12   MR. BURESH: Slide 46 from Dr. Nettles,

13   please. I'm sorry, from Dr. Almeroth, my mistake.

14   Q.   (By Mr. Buresh) Now, Dr. Almeroth, this is

15   one of your demonstratives; is that correct?

16   A.   It is.

17   Q.   In this lower box of source code that you're

18   highlighting here, what does that source code do in the

19   PTS products?

20   A.   What that is doing is it's calculating what's

21   called a hash. A hash is a combination of fields to

22   attempt to create a unique identifier. So in this case,

23   the hash is being calculated of the list of information

24   that's identified here.

25   Q.   And that list of information includes the

```
 1  5-Tuple; is that correct?

 2       A.   Yes.

 3       Q.   Now, you've mentioned priming -- the concept

 4  of priming a number of times.  In fact, you reiterated

 5  from some testimony from Mr. Don Bowman regarding

 6  priming.  Do you recall that?

 7       A.   I do.

 8       Q.   Where he said that in the PTS products,

 9  priming could use information from one flow to help

10  identify another potential future flow.  Do you recall

11  that testimony?

12       A.   I do.

13       Q.   And you would agree with me, would you not,

14  that the use of information from one flow to help

15  identify the application of a future flow does not

16  constitute a conversational flow?

17       A.   Not by itself.

18            MR. BURESH:   Your Honor, I pass the

19  witness.

20            THE COURT:  Redirect, Ms. Abdullah?

21            MS. ABDULLAH:  Yes, very briefly, Your

22  Honor.

23            THE COURT:  Proceed.

24                 REDIRECT EXAMINATION

25  BY MS. ABDULLAH:
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 1        Q.    Dr. Almeroth, for terms like flow-entry

 2 database and conversational flow, whose definition do we

 3 have to follow?

 4        A.    The Court's construction.

 5        Q.    And is that required for us to do in an

 6 infringement analysis?

 7        A.    It absolutely is required.

 8              MS. ABDULLAH:   Now, if we could pull up

 9 PTX-9, and I believe Mr. Buresh pulled up Column 5 at

10 the very top.   Will you just enlarge that?

11        Q.    (By Ms. Abdullah)   And, Dr. Almeroth, do you

12 remember him asking you about one of the embodiments or

13 examples presented here?

14        A.    Yes, ma'am, I do, the maintaining statistics

15 embodiment.

16        Q.    Now, when you're doing an infringement

17 analysis, what matters, the embodiments described or the

18 actual claims of the patent?

19        A.    The claims and the claim language.

20              MS. ABDULLAH:   If we could go to Claim

21 19.

22        Q.    (By Ms. Abdullah)   Now, in the context of

23 conversational flow, does this claim use the word

24 "statistics" at all?

25        A.    It does not.
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 1        Q.    By the way, do PTS products maintain

 2  statistics as part of their analyses?

 3        A.    Yes, they do.

 4        Q.    Can you describe that briefly for us, please?

 5        A.    Sure.  In the flow records, some of the fields

 6  that are contained identify the number of bytes that

 7  are -- that have been identified as being part of that

 8  application.  There are fields that are used.  And from

 9  those fields, statistics can be created and presented as

10  part of an interface to a user.

11        Q.    Thank you, Dr. Almeroth.

12              MS. ABDULLAH:  Pass the witness.

13              THE COURT:  Further cross-examination,

14  Mr. Buresh?

15              MR. BURESH:  Very briefly, Your Honor.

16              Can we pull up the summary of the '789

17  patent again?

18                    RECROSS-EXAMINATION

19  BY MR. BURESH:

20        Q.    Now, Dr. Almeroth, you testified in your

21  direct before I crossed you about this maintain

22  statistics, right?

23        A.    I did.

24        Q.    And the word "statistics" didn't appear in the

25  claim language?
```

1   A.   Not for '789, Claim 19.

2   Q.   So when you were just asked a question about

3   whether it dealt with statistics for conversational

4   flows, and you said, no, and it didn't apply to your

5   maintain statistics that you talked about either, did

6   it?

7   A.   I don't understand the question.

8   Q.   I withdraw the question.

9   MR. BURESH: Nothing further, Your Honor.

10 I pass the witness.

11   THE COURT: All right. Is there further

12 redirect?

13   MS. ABDULLAH: No, Your Honor, and we

14 move that Dr. Almeroth be excused.

15   THE COURT: Dr. Almeroth, you may step

16 down.

17   Is there objection to him being excused?

18   MR. BURESH: No, Your Honor.

19   THE COURT: You are also excused, Dr.

20 Almeroth. It means you're free to stay, and you're also

21 free leave.

22   THE WITNESS: Thank you, Your Honor.

23   THE COURT: Counsel, approach the bench,

24 please?

25   (Bench conference.)

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 1                    THE COURT:   Does Plaintiff have further

 2   rebuttal witnesses?

 3                    MR. DAVIS:   No, Your Honor.

 4                    THE COURT:   The jury's lunch is here.

 5   I'm going to excuse them for lunch.  And then I'll bring

 6   them back after lunch and let Plaintiff close its

 7   rebuttal case.

 8                    MR. DAVIS:   Thank you.

 9                    THE COURT:   All right?

10                    MR. SKIERMONT:   Thank you.

11                    MR. BURESH:   Thank you.

12                    (Bench conference concluded.)

13                    THE COURT:   Ladies and gentlemen of the

14   jury, your lunch is waiting for you, I'm told, in the

15   jury room.  We're going to recess for lunch at this

16   time.

17                    I'm going to ask you to take your

18   notebooks with you.  As you would expect, I'll remind

19   you to follow all my instructions, including not to

20   discuss the case among yourselves.  Enjoy your lunch,

21   and we'll be back to continue after lunch is over.

22   The jury is excused for recess at this time.

23                    COURT SECURITY OFFICER:   All rise for the

24   jury.

25                    (Jury out.)
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1   THE COURT: Counsel, I have another

2 matter to take up at 12:15 in an unrelated case. So

3 we're going to recess until 1:15.

4   We'll reconvene at that time. The Court

5 stands in recess.

6   (Recess.)

7   *****************************

8

9

10

11

12   CERTIFICATION

13

14   I HEREBY CERTIFY that the foregoing is a true

15 and correct transcript from the stenographic notes of

16 the proceedings in the above-entitled matter to the best

17 of my ability.

18

19

20 /s/Shelly Holmes   _11/8/17_____
    SHELLY HOLMES, CSR, TCRR   Date
21 OFFICIAL COURT REPORTER
    State of Texas No.: 7804
22 Expiration Date: 12/31/18

23

24

25